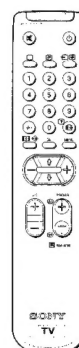
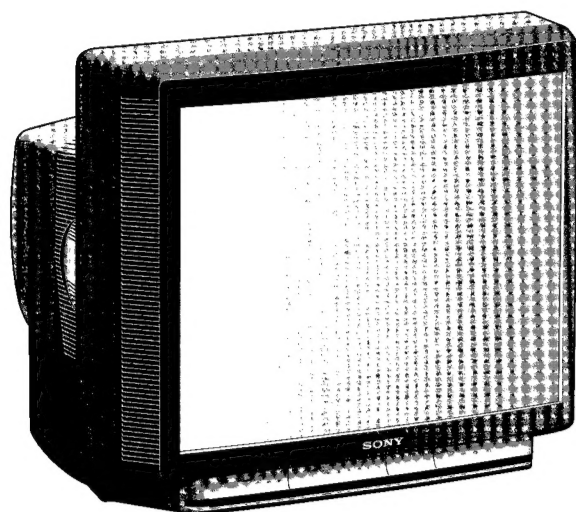


SERVICE MANUAL

BE-3D CHASSIS

MODEL	COMMANDER	DEST.	CHASSIS NO.	MODEL	COMMANDER	DEST.	CHASSIS NO.
KV-29X1A	RM-839	Italian	SCC-K05H-A	KV-29X1K	RM-839	OIRT	SCC-K08Q-A
KV-29X1B	RM-839	French	SCC-K01H-A	KV-29X1L	RM-839	Irish	SCC-J21B-A
KV-29X1D	RM-839	AEP	SCC-K07H-A	KV-29X1R	RM-839	OIRT	SCC-K08R-A
KV-29X1E	RM-839	Spanish	SCC-K06H-A	KV-29X1U	RM-839	UK	SCC-K04F-A



TRINITRON® COLOR TV
SONY®

ITEM	MODEL	Television System	Channel Coverage	Colour System
Italian		B/G/H	VHF: E2-E12, S1-S20, A-H, H1, H2 UHF: E21-E69	PAL NTSC3.58/4.43 (video input only)
French		B/G/H, D/K, L, I	L SECAM VHF: F2-F10 UHF: F21-F69 TV CABLE TV (1) VHF: B-Q UHF: S21-S44 PAL B/G/H VHF: E2-E12 UHF: E21-E69 CABLE TV (1) : S1-S41 CABLE TV (2) : S01-S05, M1-M10, U1-U10 ITALIA VHF: A-H, H1, H2 PAL I UHF: B21-B69 D/K VHF: R01-R20 UHF: B21-B69 CABLE TV (1) : S1-S41 CABLE TV (2) : S01-S05, S42-S46	PAL, SECAM NTSC3.58/4.43 (video input only)
AEP		B/G/H, D/K	B/G/H VHF: E2-E12 UHF: S1-S20 CABLE TV (1) : S1-S41 CABLE TV (2) : S01-S05, M1-M10, U1-U10 ITALIA VHF: A-H, H1, H2 D/K VHF: R01-R20 UHF: B21-B69 CABLE TV (1) : S1-S41 CABLE TV (2) : S01-S05, S42-S46	PAL, SECAM NTSC3.58/4.43 (video input only)
Spanish		B/G/H, D/K	PAL B/G/H VHF: E2-E12 UHF: E21-E69 CABLE TV (1) : S1-S41 CABLE TV (2) : S01-S05, M1-M10, U1-U10 ITALIA VHF: A-H, H1, H2 D/K VHF: R01-R20 UHF: B21-B69 CABLE TV (1) : S1-S41 CABLE TV (2) : S01-S05, S42-S46	PAL, SECAM NTSC3.58/4.43 (video input only)
OIRT		B/G/H, D/K	B/G/H VHF: E2-E12 UHF: E21-E69 CABLE TV (1) : S1-S41 CABLE TV (2) : S01-S05, M1-M10, U1-U10 ITALIA VHF: A-H, H1, H2 D/K VHF: R01-R12 UHF: R21-R69 CABLE TV (1) : S1-S41 CABLE TV (2) : S01-S05, S42-S46	PAL, SECAM NTSC3.58/4.43 (video input only)
Irish UK		I	UHF: U21-U69	PAL NTSC3.58/4.43 (video input only)

MODEL	29X1A	29X1B	29X1D	29X1E	29X1K 29X1R	29X1L 29X1U
Power Consumption	87W	101W	101W	101W	101W	149W

SPECIFICATIONS

Picture Tube Super Trinitron
Approx. 72 cm (29 inches)
(Approx. 68 cm picture measured diagonally)
110° -deflection

[FRONT]

- ➡ 3, Video input - phono jack
- ➡ 3, Audio inputs - phono jacks
- ➡ 3, S video input - 4 pin DIN
- 🎧 Stereo minijack - headphone jack

Rear/Front Terminals

[REAR]

- ➡ 1 21-pin Euro connector (CENELEC standard)
 - Inputs for audio / video signals
 - Inputs for RGB
 - Outputs for TV audio and video signals
- ➡ 2/➡ 2, 21-pin Euro connector (CENELEC standard)
 - Inputs for audio / video signals
 - Inputs for S video
 - Outputs for TV audio and video signals (selectable)

Sound output

Left/Right 2x10W (RMS)
2x20W (music power)

Dimensions 676x557x528 mm approx.

Weight Approx. 43.0 kg

Supplied accessories RM-839 Remote Commander (1)
Batteries R6 (2)

Other features Fastext, TOPTXT


[RM-839]

Remote control system	Infrared control
Power requirements	3V dc (2 batteries) R6 (size AA)
Dimensions	Approx. 210x45x24 mm (w/h/d)
Weight	Approx. 90g (Not including battery)

Design and specifications are subject to change without notice.

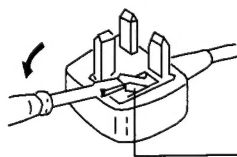
Model name Item	KV-29X1A	KV-29X1B	KV-29X1D	KV-29X1E	KV-29X1K KV-29X1R	KV-29X1L KV-29X1U
PIP	OFF	OFF	OFF	OFF	OFF	OFF
MPIP	OFF	OFF	OFF	OFF	OFF	OFF
Rotation Coil	ON	ON	ON	ON	ON	ON
VM Set	ON	ON	ON	ON	ON	ON
Scart 1	ON	ON	ON	ON	ON	ON
Scart 2	ON	ON	ON	ON	ON	ON
Front in (3)	ON	ON	ON	ON	ON	ON
Scart 4	OFF	OFF	OFF	OFF	OFF	OFF
AKB in 16:9 mode	ON	ON	ON	ON	ON	ON
TXT	ON	ON	ON	ON	ON	ON
FLOF	ON	ON	ON	ON	ON	ON
TOP	ON	ON	ON	ON	ON	ON
Norm B/G/H	ON	ON	ON	ON	ON	OFF
Norm I	OFF	ON	OFF	OFF	OFF	ON
Norm D/K	OFF	ON	ON	ON	ON	OFF
Norm L	OFF	ON	OFF	OFF	OFF	OFF
Language Preset	Italian	French	German	Spanish	OIRT	English

WARNING (KV-29X1L/29X1U only)

The flexible mains lead is supplied connected to a **B.S. 1363** fused plug having a fuse of **5 AMP** capacity. Should the fuse need to be replaced, use a **5 AMP FUSE** approved by **ASTA** to **BS 1362**, ie one that carries the  mark.

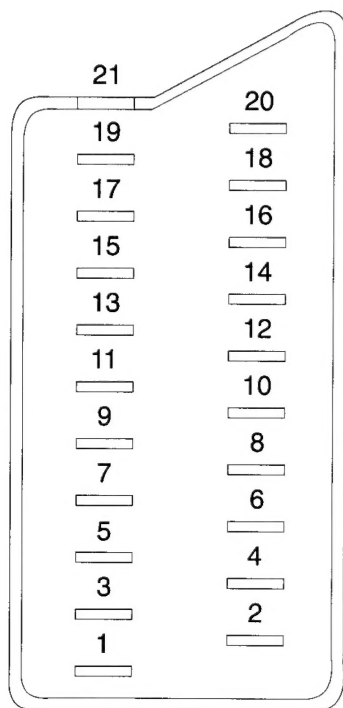
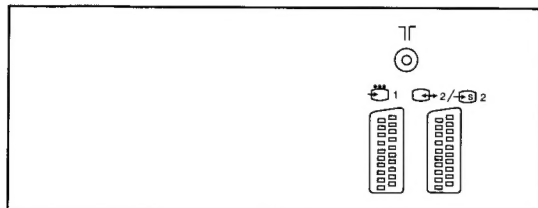
IF THE PLUG SUPPLIED WITH THIS APPLIANCE IS NOT SUITABLE FOR YOUR SOCKET OUTLETS IN YOUR HOME. IT SHOULD BE CUT OFF AND AN APPROPRIATE PLUG FITTED. THE PLUG SEVERED FROM THE MAINS LEAD MUST BE DESTROYED AS A PLUG WITH BARED WIRES IS DANGEROUS IF ENGAGED IN A LIVE SOCKET OUTLET.

When an alternative type of plug is used it should be fitted with a **5 AMP FUSE**, otherwise the circuit should be protected by a **5 AMP FUSE** at the distribution board.



How to replace the fuse.
Open the fuse compartment with the screwdriver blade and replace the fuse.

21 pin connector (→ 1, ↔ 2 / → S 2)



Pin No.	1	2	4	Signal	Signal Level
1	○	○	○	Audio output B (Right)	Standard level : 0.5V rms Output impedance : Less than 1k ohms*
2	○	○	○	Audio input B (Right)	Standard level : 0.5V rms Output impedance : More than 10k ohms*
3	○	○	○	Audio output A (Left)	Standard level : 0.5V rms Output impedance : Less than 1k ohm*
4	○	○	○	Ground (Audio)	
5	○	○	○	Ground (Blue)	
6	○	○	○	Audio input A (Left)	Standard level : 0.5V rms Output impedance : Less than 10k ohm*
7	○	●	●	Blue input	0.7 ± 3dB, 75 ohms, positive
8	○	○	○	Function select (AV control)	High state (9.5 - 12V) : Part mode Low state (0 - 2V) : TV mode Input impedance : More than 10k ohms Input capacitance : Less than 2nF
9	○	○	○	Ground (Green)	
10	○	○	○	Open	
11	○	●	●	Green	
12	○	○	○	Open	
13	○	○	○	Ground (Red)	
14	○	○	○	Ground (Blanking)	
15	○	—	—	Red input	0.7 ± 3dB, 75 ohms, positive
	—	○	○	(S signal) chroma input	0.7 ± 3dB, 75 ohms, positive
16	○	●	●	Blanking input (Ys signal)	High state (1 - 3V) Low state (0 - 0.4V) Input impedance : 75 ohms
17	○	○	○	Ground (Video output)	
18	○	○	○	Ground (Video input)	
19	○	○	○	Video output	1V ± 3dB, 75ohms, positive sync : 0.3V (-3 + 10dB)
20	○	—	—	Video input	1V ± 3dB, 75ohms, positive sync : 0.3V (-3 + 10dB)
	—	○	○	Video input Y (S signal)	1V ± 3dB, 75ohms, positive sync : 0.3V (-3 + 10dB)
21	○	○	○	Common ground (plug, shield)	

○ Connected ● Not Connected (Open) * at 20Hz - 20kHz

Pin No.	Signal	Signal Level
1	Ground	
2	Ground	
3	Y (S signal) input	1V ± 3dB 75 ohm, positive Sync. 0.3V -3 + 10dB
4	C (S signal) input	0.3V ± 3dB 75ohm, positive Sync.

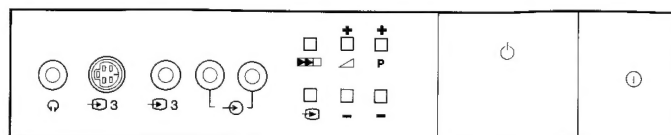


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CAUTION


SHORT CIRCUIT THE ANODE OF THE PICTURE TUBE AND THE ANODE CAP TO THE METAL CHASSIS, CRT SHIELD, OR CARBON PAINTED ON THE CRT, AFTER REMOVING THE ANODE.

WARNING !!

AN ISOLATION TRANSFORMER SHOULD BE USED DURING ANY SERVICE TO AVOID POSSIBLE SHOCK HAZARD, BECAUSE OF LIVE CHASSIS.

THE CHASSIS OF THIS RECEIVER IS DIRECTLY CONNECTED TO THE AC POWER LINE.

SAFETY-RELATED COMPONENT WARNING!!

COMPONENTS IDENTIFIED BY SHADING AND MARK  ON THE SCHEMATIC DIAGRAMS, EXPLODED VIEWS AND, IN THE PARTS LIST ARE CRITICAL FOR SAFE OPERATION. REPLACE THESE COMPONENTS WITH SONY PARTS WHOSE PART NUMBERS APPEAR AS SHOWN IN THIS MANUAL OR IN SUPPLEMENTS PUBLISHED BY SONY.


ATTENTION

APRES AVOIR DECONNECTE LE CAP DE L'ANODE, COURT-CIRCUITER L'ANODE DU TUBE CATHODIQUE ET CELUI DE L'ANODE DU CAP AU CHASSIS METALLIQUE DE L'APPAREIL, OU AU COUCHE DE CARBONE PEINTE SUR LE TUBE CATHODIQUE OU AU BLINDAGE DU TUBE CATHODIQUE.

ATTENTION !!

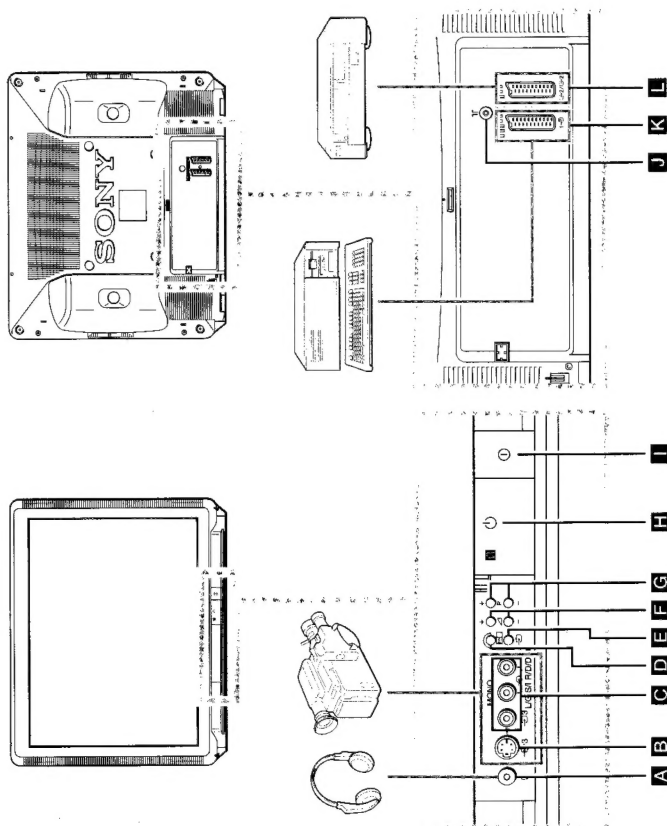
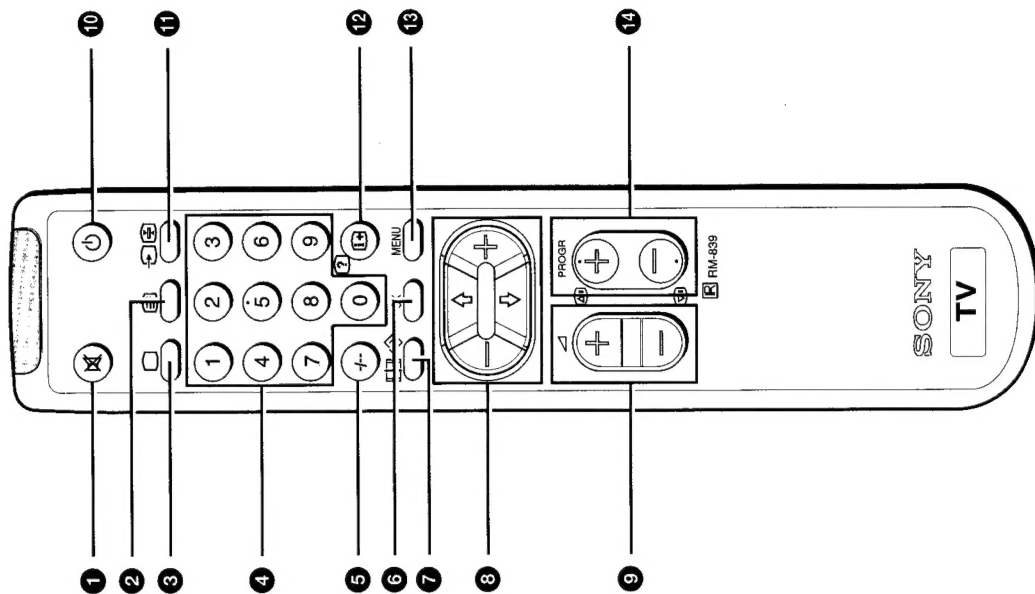
AFIN D'EVITER TOUT RISQUE D'ELECTROCUTION PROVENANT D'UN CHÂSSIS SOUS TENSION, UN TRANSFORMATEUR D'ISOLEMENT DOIT ETRE UTILISÉ LORS DE TOUT DÉPANNAGE. LE CHÂSSIS DE CE RÉCEPTEUR EST DIRECTEMENT RACCORDÉ À L'ALIMENTATION SECTEUR.

ATTENTION AUX COMPOSANTS RELATIFS À LA SÉCURITÉ!!

LES COMPOSANTS IDENTIFIÉS PAR UNE TRAME ET PAR UNE MARQUE  SUR LES VUES EXPLOSÉES ET LES LISTES DE PIÉCES SONT D'UNE IMPORTANCE CRITIQUE PUR LA SÉCURITÉ DU FONCTIONNEMENT. NE LES REMPLACER QUE PAR DES COMPOSANTS SONY DONT LE NUMÉRO DE PIÉCE EST INDIQUÉ DANS LE PRÉSENT MANUEL OU DANS DES SUPPLÉMENTS PUBLIÉS PAR SONY.

SECTION 1 GENERAL













The operating instructions mentioned here are partial abstracts from the Operating Instruction Manual. The page numbers of the Operating Instruction Manual remain as in the manual.













Overview

This section briefly describes the controls and the buttons on the TV set and on the Remote Commander. Please open the flap at the front of the instruction manual for illustrations of the TV set and the Remote Commander. Letters in boxes refer to the buttons on the TV set, numbers in circles to the buttons on the Remote Commander. For more information, refer to the page numbers given next to each description.

TV buttons and Terminals


Reference and Symbol	Name	Refer to Page
Front of the set		
A 	Headphones jack	4
B 	S video input jack	29
C 	Audio/ video input jacks	29
D 	Automatic Preset button	11
E 	Input mode button	13
F 	Volume control	12
G 	Programme button	12
H 	Standby mode indicator	12
I 	Main power switch	12
Rear of the set		
J 	Aerial socket	10
K 	21 pin Euro connector	29
L 	21 pin Euro connector	29

Remote Commander Operation

Reference and Symbol	Name	Refer to Page
1 	Muting on/off button	12
2 	Teletext button	13
3 	TV power on/TV mode button	12, 13
4 1, 2, ..., 9, 0	Number buttons	12
5 - / - -	Double digit entering button	12
6 OK	OK (Confirmation) button	14
7 	Screen format button Teletext: Favourite pages button	12, 28
8 	Menu control	14
9 	Volume control button	12
10 	Standby button	12
11 	Input mode button Teletext: Freezing the subpage	13, 27
12 	On-screen display button Teletext: reveal button	12, 27
13 MENU	Menu on/off button	14
14 	Programme buttons Teletext: Page up/ page down buttons	12, 13

Step 1

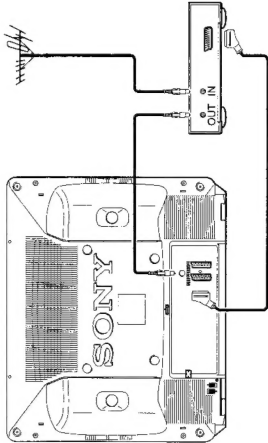
Connecting the Aerial
(If you connect a VCR, skip to step 2)

Insert the aerial plug tightly into the aerial socket . Use a good-quality aerial cable (not supplied), corresponding to the relevant regulations.

Step 2

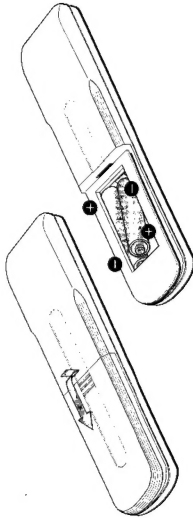
Connecting a VCR

We recommend that you tune in the VCR signal to programme number "0". For details, see "Presetting Channels Manually" on page 16. See "Connecting Optional Equipment" on page 29 for more information.



Step 3

Inserting the Batteries Into the Remote Commander



Respect your environment! Dispose of used batteries in an environmentally friendly way.

Step 4

Presetting Channels Automatically

With this function, the TV can automatically search and store up to 100 different channel numbers. If you prefer manual presetting, refer to "Presetting Channels Manually" on page 16.

1 Plug into mains.

Press the power switch  on the TV set.

2 Press and hold the button  on the TV set until the automatic menu is displayed and the search starts.

After all available channels are stored, the normal TV picture is shown.

Note: Channels are automatically stored as follows;

KV-25X1U/29X1U	KV-25X1L/29X1L
Programme 1 BBC1 Programme 2 BBC2 Programme 3 ITV Programme 4 CH4 or S4C	Programme 1 RTE1 Programme 2 RTE2 Programme 3 BBC1 Programme 4 BBC2 Programme 5 ITV Programme 6 CH4 or S4C

TV Operation

This section explains functions used whilst watching TV. Most operations are carried out using the remote commander (numbers in circles). All basic functions are also available on the TV set (letters in boxes). Open the flap at the front of the Instruction Manual to see the illustrations of the Remote Commander and the TV set.

TV Operation

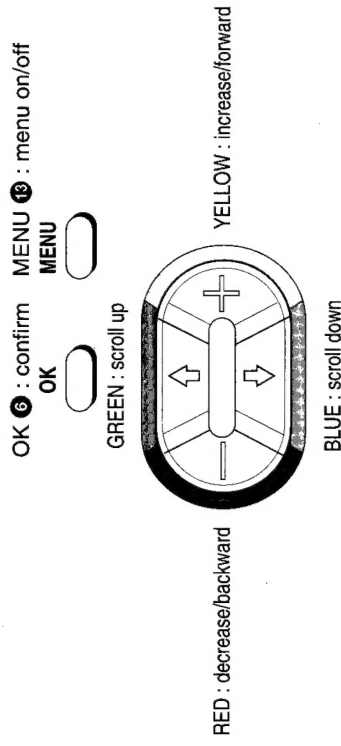
To	Press
Switch on	① I on TV
Switch off temporarily	⏻ ⑩ TV is now in standby mode and ⏻ H indicator on TV lights up.
Switch on from standby mode	□ ③, PROG + / - ⑭ G or any number button ④.
Switch off completely	① I on TV To save energy, switch off your TV completely when TV is not in use.
Select programmes	PROG + / - ⑭ G or number buttons ④ For double digit number, press - / - ⑤ then the number e.g. For 23, press - / - ⑤ then 2 and 3.
Display on screen indications	① ⑫. Press again to make the indications disappear.
Adjust the volume	△ + or - ⑨ F
Mute the sound	⊗ ①. Press again to restore the sound.
View programmes in 16:9 mode	⏻ ⑦. Press again to return to 4:3 mode.

TV Operation (continued)

To	Press
View video input picture (see page 30 for detailed information)	↶ ⑪ E repeatedly until the desired video input appears. Press □ ③ to restore the TV picture.
View teletext (see page 27 for detailed information)	
Switch on	⏻ ②
Select a page	three number buttons ④ or ⏻ ⑭ (for next page) or ⏻ ⑭ (for previous page).
Use fasttext	Blue, Green, Red or Yellow ⑧.
Switch off	□ ③

Adjusting and Setting the TV Using the Menu

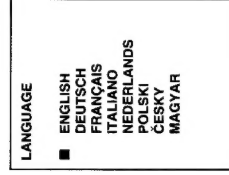
You can adjust and set various functions on the TV using the following remote commander buttons:



Choosing the Menu Language

This function enables you to change the language of the menu screens.

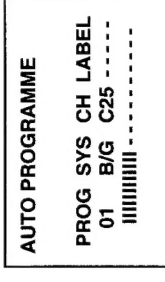
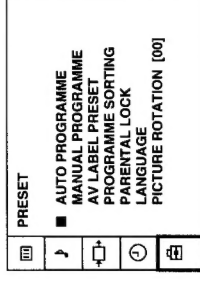
- 1 Press power switch **1** on the TV. If the standby indicator **1** on the TV is lit, press **3** or a number button **4** on the Remote Commander.
- 2 Press the MENU button **13** on the remote commander.
- 3 Press blue or green **8** to select the language you want then press yellow **8**.
- 4 Press the MENU button **13** to restore the normal TV picture.



Presetting Channels Automatically

You may have already preset the channels automatically by using the method shown on page 11. You can also preset channels automatically by using the remote commander as follows:


- 1 Press the MENU button **13**.
- 2 Press blue or green **8** to select the symbol **8** on the menu screen then press yellow **8**.
- 3 Press blue or green **8** to select 'AUTO PROGRAMME'.
- 4 Press and hold yellow **8** until the automatic menu is displayed and the search starts.
After all available channels have been preset, the normal TV picture is shown.



Presetting Channels Manually

This function enables you to preset channels one by one to different programme numbers. This is also convenient for allocating programme numbers to various video input sources.

1 Press the MENU button **13**.

2 Press blue or green **8** to select the symbol  on the menu screen then press yellow **8**.



3 Press blue or green **8** to select 'MANUAL PROGRAMME' then press yellow **6**.

MANUAL PROGRAMME PRESET					
PROG	SYS	CHAN	LABEL	AFT	
1	B/G	C 1	----	ON	
2	B/G	C 4	----	ON	
3	B/G	C12	----	ON	
4	B/G	C22	----	ON	
5	B/G	C33	----	ON	
6	B/G	C41	----	ON	
7	B/G	C17	----	ON	
8	B/G	C32	----	ON	

4 Press blue or green **8** to select on which programme number you want to preset a channel then press yellow **8**.

5 Press blue or green **8** to select the TV broadcast system 'T' or a video input source (AV1,AV2 ...) then press yellow **8**.

6 (This step 6 is only for KV-25X1L/29X1L)

Press blue or green **8** to select 'C' (for terrestrial channels) or 'S' (for cable channels) then press yellow **8**.

7 Select the first number digit of 'CHAN' then the second number digit of 'CHAN' with the number buttons **4** on the remote commander
or
Press blue or green **8** to search for the next available channel number.

8 If you want to store the channel number, go to step 9. If not, select a new channel number using the number buttons **4** on the remote commander or press blue or green **8** to resume the search.

9 Press OK **6**.

10 Repeat steps 4 to 9 to preset other channels.

11 Press the MENU button **13** to restore the normal TV picture.

Adjusting the Picture and Sound

Although the picture and sound are adjusted at the factory, you can adjust them to suit your own taste.

- 1

Press the MENU button **13**.
- 2

Press blue or green **8** to select **[PI]** for picture control or **[S]** for sound control then press yellow **6**.

SOUND CONTROL

TREBLE
BASS
BALANCE
RESET
SPATIAL
DUAL SOUND
VOLUME OFFSET [A]
VOLUME [A]
DUAL SOUND [A]

PICTURE CONTROL

CONTRAST
BRIGHTNESS
COLOUR
SHARPNESS
HUE
RESET
- 3

Press blue or green **8** to select the desired item then press yellow **6**.
- 4

Press red or yellow **8** to alter the item then press OK **6**.
For the effect of each control, see the following tables.
- 5

Repeat steps 3 and 4 to adjust the other items.
- 6

Press the MENU button **13** to restore the normal TV picture.


PICTURE CONTROL	Effect
Contrast	Lower — — Higher
Brightness	Darker — — Brighter
Colour	Less — — More
Sharpness	Softer — — Sharper
Hue	Greenish — — Reddish (NTSC signals only)
Reset	Resets picture to the factory preset levels.

Adjusting the Picture and Sound (continued)

SOUND CONTROL	Effect
Treble	Less — — More
Bass	Less — — More
Balance	Left — — Right
Reset	Resets sound to the factory preset levels.
Spatial	Acoustic sound effect.
Dual Sound	A: Left channel —> B: Right channel —> stereo —> mono
Volume Offset	Presets the volume level for individual programmes. -12 — 0 — +12
Volume	Adjusts the headphone volume.
Dual Sound	Presets the headphone channels. A: Left channel —> B: Right channel —> stereo —> mono

Manual Fine-Tuning


Normally, the automatic fine-tuning (AFT) function is operating. If the picture is distorted however, you can manually fine-tune the TV to obtain a better picture reception.








- 1 Press the MENU button **13**.
- 2 Press blue or green **8** to select the symbol  on the menu screen then press yellow **8**.
- 3 Press blue or green **8** to select 'MANUAL PROGRAMME' then press yellow **8**.

MANUAL PROGRAMME PRESET			
PROG	SYS	CHAN	LABEL
1	B/G	C 1	----
2	B/G	C 4	----
3	B/G	C12	----
4	B/G	C22	----
5	B/G	C33	----
6	B/G	C41	----
7	B/G	C17	----
8	B/G	C32	----
- 4 Press blue or green **8** to select the programme number which corresponds to the channel you want to manually fine-tune.
- 5 Press yellow **8** repeatedly until the AFT position changes colour..
- 6 Press blue or green **8** to change the frequency of the channel from -15 to +15.
- 7 Press OK **6**.
- 8 Repeat steps 4 to 7 to fine-tune other channels.
- 9 Press the MENU button **13** to restore the normal TV picture.

Sorting Programme Positions

This function enables you to move channels to different programme numbers.


- 1 Press the MENU button **13**.
- 2 Press blue or green **8** to select the symbol  on the menu screen then press yellow **8**.
- 3 Press blue or green **8** to select 'PROGRAMME SORTING' then press yellow **8**.

PRESET	
	AUTO PROGRAMME
	MANUAL PROGRAMME
	AV LABEL PRESET
	PROGRAMME SORTING
	PARENTAL LOCK
	LANGUAGE
	PICTURE ROTATION [00]
- 4 Press blue or green **8** to select the channel you want to move to another programme number then press yellow **8**.

PROGRAMME SORTING			
PROG	SYS	CHAN	LABEL
1	B/G	C23	BBC -1
2	B/G	C26	RTL -1
3	B/G	C29	VHS -1
4	B/G	C31	ZDF -1
5	B/G	C44	ITV -1
6	B/G	C14	SKY -1
7	B/G	C18	SAT -1
8	B/G	C16	BBC -2
- 5 Press blue or green **8** to select the programme number to which you want to move the channel selected in step 4 then press yellow **8**.
- 6 Repeat steps 4 to 5 if you wish to move other channels to different programme numbers.
- 7 Press the MENU button **13** to restore the normal TV picture.


Using Parental Lock

This function enables you to prevent undesirable broadcasts from appearing on the screen. We suggest you use this function to prevent children from watching programmes which you consider unsuitable.

- 1 Press the MENU button **13**.
- 2 Press blue or green **8** to select the symbol  on the menu screen then press yellow **8**.
- 3 Press blue or green **8** to select 'PARENTAL LOCK' then press yellow **8**.



- 4 Press blue or green **8** to select the channel you want to block then press yellow **8**.
The symbol appears before the programme number to indicate that this channel is now blocked.


PARENTAL LOCK			
PROG	SYS	CHAN	LABEL
	1	B/G C23	BBC -1
	2	B/G C26	RTL -1
	3	B/G C29	VHS -1
	4	B/G C31	ZDF -1
	5	B/G C44	ITV -1
	6	B/G C14	SKY -1
	7	B/G C15	SAT -1
	8	B/G C16	BBC -2

- 5 Repeat step 4 if you wish to block other channels.
- 6 Press the MENU button **13** to restore the normal TV picture.

Note: To unblock, press yellow **8** after selecting the channel to unblock in the 'PARENTAL LOCK' menu.

Using the Sleep Timer

This function enables you to select a time period after which the TV automatically switches into standby mode.

- 1 Press the MENU button **13**.
- 2 Press blue or green **8** to select the symbol  on the menu screen then press yellow **8**.
- 3 Press yellow **8**.
- 4 Press red or yellow **8** to set time delay and press OK **6**.




OFF 0:30 1:00 1:30 3:30 4:00

- One minute before the TV switches into standby mode, a message is displayed on the screen.
- 5 Press the MENU button **13** to restore the normal TV picture.

Adjusting the Picture Rotation


If, due to the earth magnetism, the picture slants, you can use the function 'Picture Rotation' to readjust the picture.

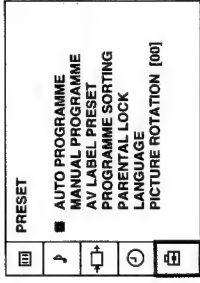
- 1 Press the MENU button **13**.
- 2 Press blue or green **8** to select the symbol  on the menu screen then press yellow **8**.
- 3 Press blue or green **8** to select 'PICTURE ROTATION' then press yellow **8**.
- 4 Press red or yellow **8** to adjust the picture rotation then press OK **6**. The adjusting range is -5 to +5.
- 5 Press the MENU button **13** to restore the normal TV picture.



Skipping Programme Positions

This function enables you to skip unused channels when selecting programme numbers with the PROG+/- buttons. However, you can still watch the skipped channel(s) by using the number buttons.


- 1 Press the MENU button **13**.
- 2 Press blue or green **8** to select the symbol  on the menu screen then press yellow **8**.
- 3 Press blue or green **8** to select 'MANUAL PROGRAMME' then press yellow **8**.
- 4 Press blue or green **8** to select the channel you want to skip then press yellow **8**.
- 5 Press blue or green **8** until '---' appears in the 'SYS' position.
- 6 Press OK **6**.
- 7 Repeat steps 4 to 6 to skip other channels.
- 8 Press the MENU button **13** to restore the normal TV picture.











MANUAL PROGRAMME PRESET					
PROG	SYS	CHAN	LABEL	AFT	
1	BIG	C 1	----	ON	
2	BIG	C 4	----	ON	
3	BIG	C12	----	ON	
4	BIG	C22	----	ON	
5	BIG	C33	----	ON	
6	BIG	C41	----	ON	
7	BIG	C17	----	ON	
8	BIG	C32	----	ON	

Captioning a Station Name

Names for channels are usually automatically taken from teletext if available. You can however name a channel or an input video source using up to five characters (letters or numbers).

- 1 Press the MENU button **13**.
- 2 Press blue or green **8** to select the symbol  on the menu screen then press yellow **8**.
- 3 Press blue or green **8** to select 'MANUAL PROGRAMME' then press yellow **8**.

PRESET	
	
	
	
	

☒ AUTO PROGRAMME

MANUAL PROGRAMME

AV LABEL PRESET

PROGRAMME SORTING

PARENTAL LOCK

LANGUAGE



PICTURE ROTATION [00]
- 4 Press blue or green **8** to select the channel you wish to caption then press yellow **8** repeatedly until the first element of the 'LABEL' position is highlighted.
- 5 Press **8** blue or green to select a letter or number and press yellow **8** (select '-' for a blank). Select other characters in the same way.

MANUAL PROGRAMME PRESET			
PROG	SYS	CHAN	LABEL AFT
1	B/G	C 1	----
2	B/G	C 4	----
3	B/G	C12	----
4	B/G	C22	----
5	B/G	C33	----
6	B/G	C41	----
7	B/G	C17	----
8	B/G	C32	----
- 6 After selecting all the characters, press OK **6**.
- 7 Repeat steps 4 to 6 to caption names for other channels.
- 8 Press the MENU button **13** to restore the normal TV screen.






Teletext

Most TV channels broadcast information via teletext. The index page of the broadcaster (usually page 100) gives you information on how to use the service. Make sure you use a TV channel with a strong signal, otherwise teletext errors may occur.

Switching Teletext On and Off

- 1 Select the channel which carries the teletext service you wish to view.
- 2 Press  to display teletext. If no teletext signal is broadcast, the indication P100 is displayed on a black screen.
- 3 Input three digits for the page number using the number buttons **4**. The page counter searches for the page and after some seconds the page is displayed.
- 4 Press  to return to the normal TV picture.

Using Other Teletext Functions

To	Press
Access the next or preceding teletext page	 14 for the next page or  14 for the preceding page
Mix the mode	 2 when in teletext mode. Now the teletext page is superimposed on the TV programme. Press again to return to the normal teletext display.
Freeze a teletext subpage	 11 . Press once again to cancel.
Reveal hidden information (eg: answers to a quiz)	 12 . Press once again to cancel.

Favourite page system

You can store up to four of your favourite teletext pages per Teletext service. In this way you have quick access to the pages you frequently use.

Storing pages

- 1 Use the number buttons **4** to select the page you would like to store.
 - 2 Press **<> 7** twice.
The colour prompts at the bottom of the screen flash.
 - 3 Press red, green, blue or yellow to store the selected page.
The page is now stored on this colour.
- Repeat steps 1 to 3 for the other 3 pages.

Displaying the Favourite Pages

- 1 Press **<> 7**.
 - 2 Press blue, green, red or yellow to select the desired page.
- Make sure you press **<> 7**, otherwise the normal Fastext facility operates.





Using Fastext

(only available, if the TV station broadcasts Fastext signals)

With Fastext you can access pages with one key stroke. When Fastext is broadcast, a colour-coded menu appears at the bottom of the screen. The colours of this menu correspond to the red, green, yellow and blue colours on the Remote Commander. Press the Remote Commander colour button that corresponds to the colour-coded menu. The selected page is displayed after some seconds.

Connecting Optional Equipment

There is a wide range of optional equipment you can connect to your TV. Refer to the illustrations on the front flap page of this manual.

Symbol	Acceptable input signals	Available output signals
 3 ,  3 C	Normal audio/video and S video	No output
 1 K	Normal audio/video and RGB	Audio/video from TV tuner
 2 L	Normal audio/video and S video	Audio/video from selected source

About S video input

Video signals may be separated into Y (luminance) and C (chrominance) signals. Separating the two signals prevents interference and thus improves the picture quality.

Notes on connections:

If the picture or sound is distorted, move the VCR away from the TV.
When connecting a monaural VCR, connect only the white jack to both the TV and VCR.

Selecting Input and Output Signals

This section explains how to select the output signal from **2/** and how to select and view the input. You can use direct access buttons **1** to select the input or the menu system to select input and output.

Selecting With Direct Access Buttons

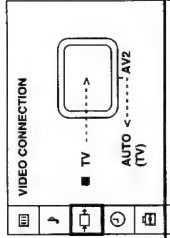
Press **1** repeatedly.
Press **2** to restore the normal TV picture.

Symbol on the screen	Input Signal
1	Audio/video through Euro AV connector K
2	RGB through Euro AV connector K
2	Audio/video through Euro AV connector L
3	S video through Euro AV connector L
3	Audio/video through the phono jacks C
3	S video through the phono jacks B

Selecting With the Video Connection Menu

- Press the MENU button **1**.
- Press blue or green **2** to select **VIDEO CONNECTION** then press yellow **3**.
- Press blue or green to select input or output then press yellow **3**.
- Press blue or green repeatedly to select the desired input or output source then press OK **6**.
- Press the MENU button **1** to restore the normal TV picture.

Note: If you select 'AUTO' for output, the output source automatically becomes the same as the desired input source.



Using AV Label Preset

This function enables you to label the input sources using up to five characters (letters or numbers).

- Press the MENU button **1**.
- Press blue or green **2** to select the symbol **3** on the screen then press yellow **3**.
- Press blue or green **2** to select 'AV LABEL PRESET' then press yellow **3**.
- Press blue or green **2** to select the desired input source then press yellow **3**.
- Press blue or green **2** to select a letter or number then press yellow **3** (select '-' for a blank).
Select other characters in the same way.
- After selecting all the characters, press OK **6**.
- Repeat steps 4 to 6 to label other input sources.
- Press the MENU button **1** to restore the normal TV screen.

AV LABEL PRESET	
INPUT	LABEL
■ AV1	-----
RGB	-----
AV2	-----
YC2	-----
AV3	-----
YC3	-----

Troubleshooting

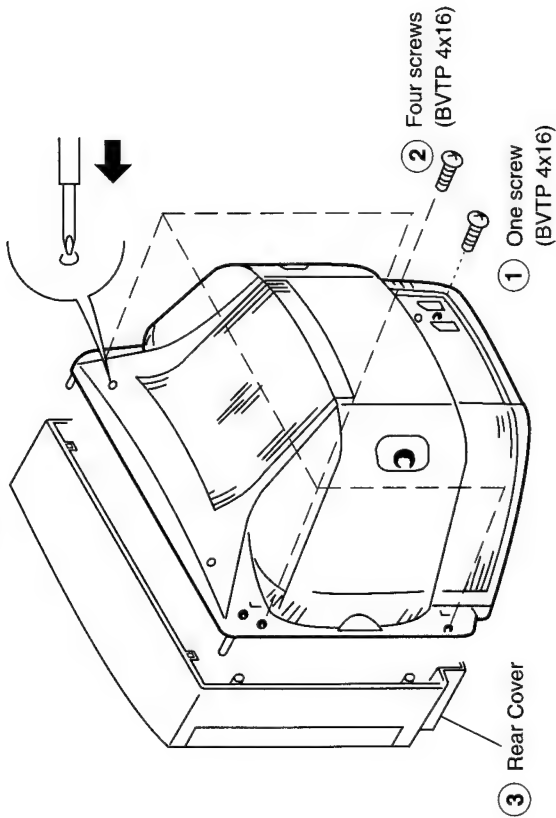
Here are some simple solutions to the problems which affect the picture and sound.

Problem	Solution
No picture (screen is dark), no sound	<ul style="list-style-type: none">• Plug the TV in.• Press 1 on the TV. (If indicator H is on, press 3 or a programme number 4 on the Remote Commander.)• Check the aerial connection.• Check if the selected video source is on.• Turn the TV off for 3 or 4 seconds then turn it on again using 1.
Poor or no picture (screen is dark), but good sound	<ul style="list-style-type: none">• Press MENU 13 to enter the 'PICTURE CONTROL' menu and adjust 'Contrast', 'Brightness' and 'Colour'.
Poor picture quality when watching an RGB video source.	<ul style="list-style-type: none">• Press 2 1 E repeatedly to select 2.
Good picture but no sound	<ul style="list-style-type: none">• Press 4 + 9 F.• If 2x is displayed on the screen, press 2x 1.
No colour for colour programmes	<ul style="list-style-type: none">• Press MENU 13 to enter the 'PICTURE CONTROL' menu, select 'Reset' then press OK 6.
Remote Commander does not function.	<ul style="list-style-type: none">• Replace the batteries.

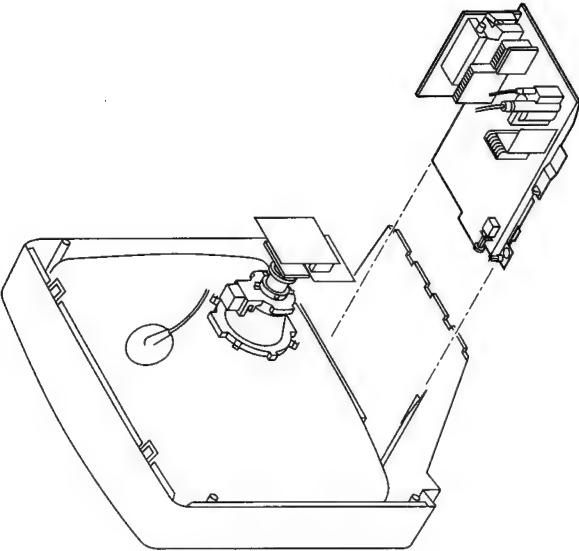
If you continue to have problems, have your TV serviced by qualified personnel.
Never open the casing yourself.

SECTION 2
DISASSEMBLY

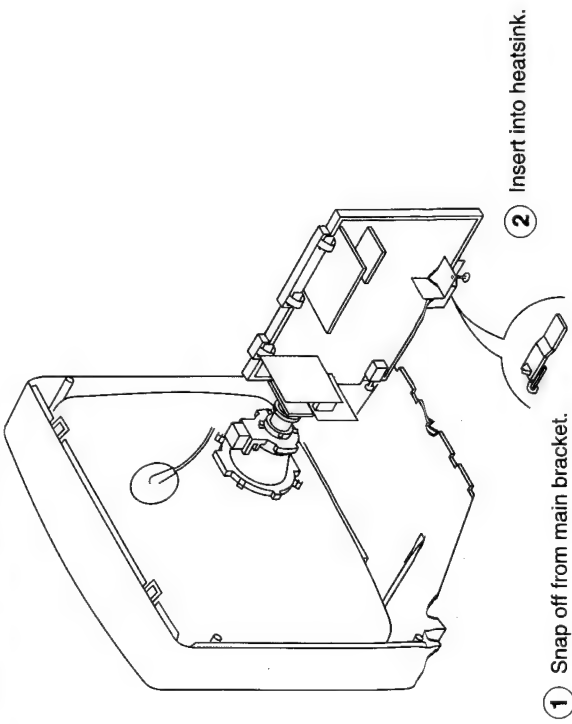
2-1. REAR COVER REMOVAL



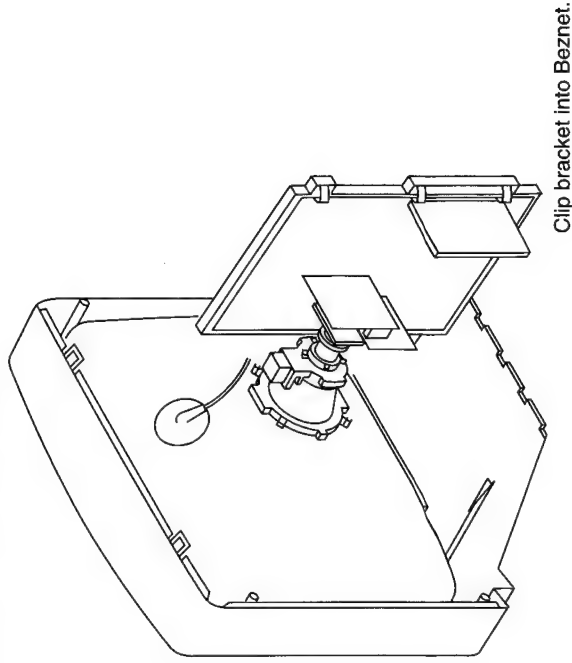
2-2. CHASSIS ASSY REMOVAL



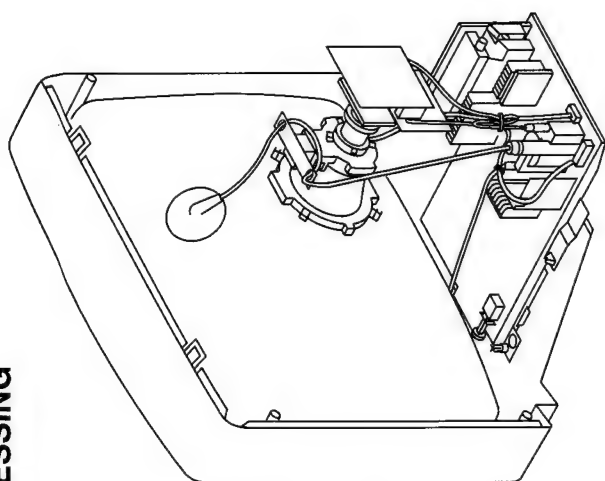
2-3-1. SERVICE POSITION (1)



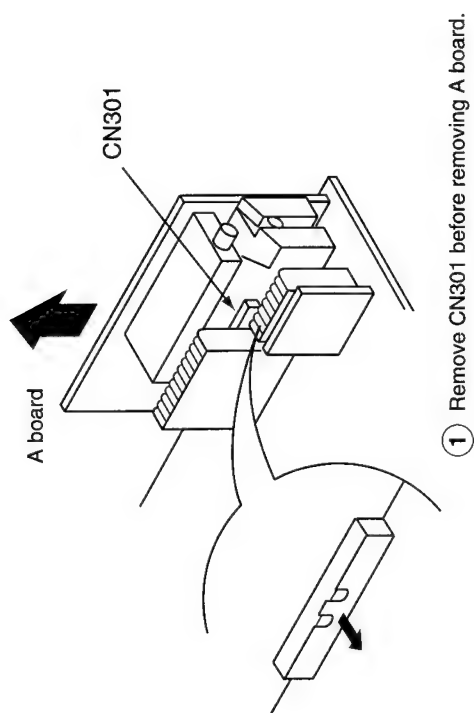
2-3-2. SERVICE POSITION (2)



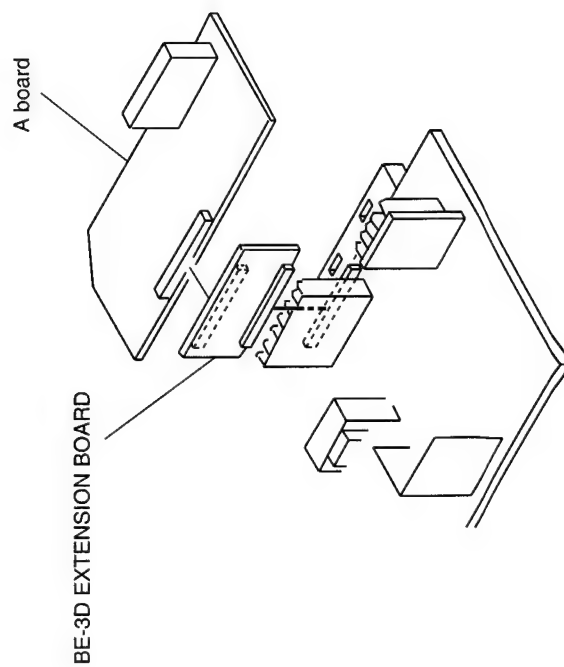
2-4. WIRE DRESSING



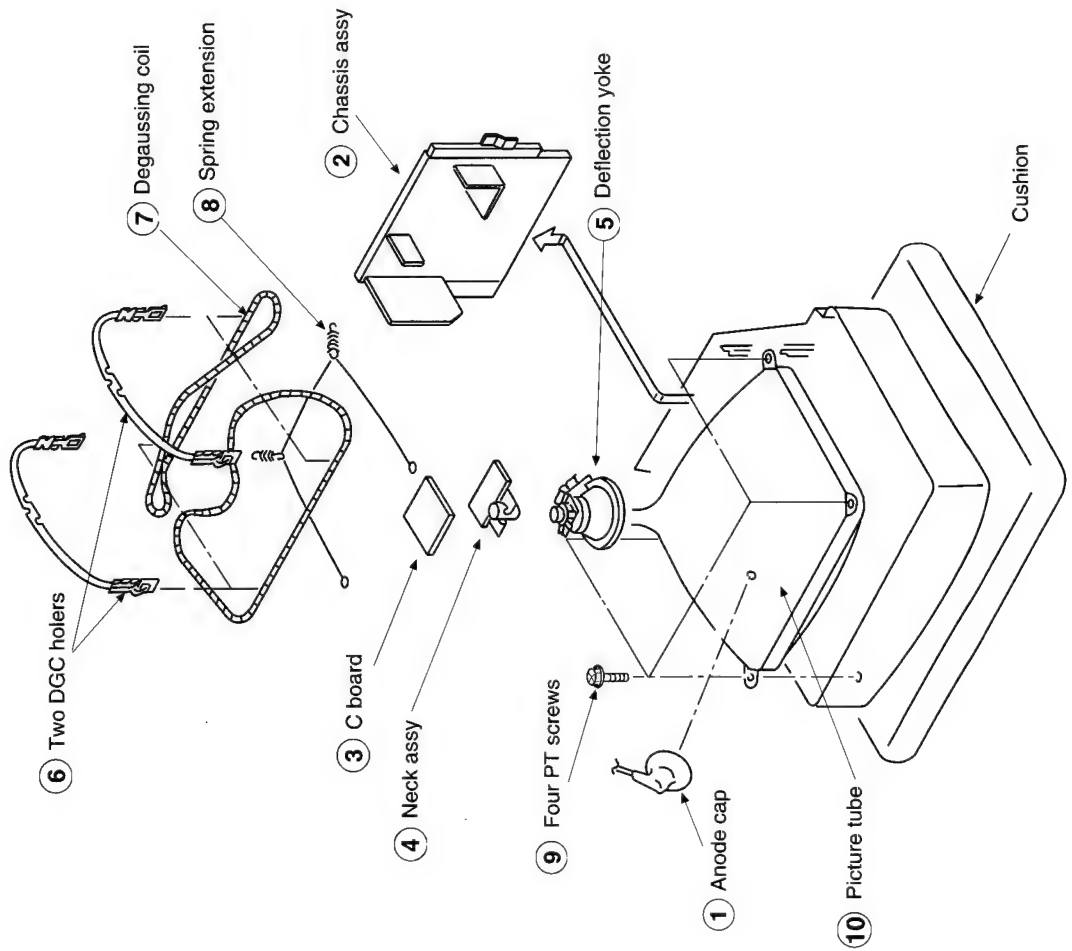
2-5. A BOARD REMOVAL



2-6. EXTENSION BOARD



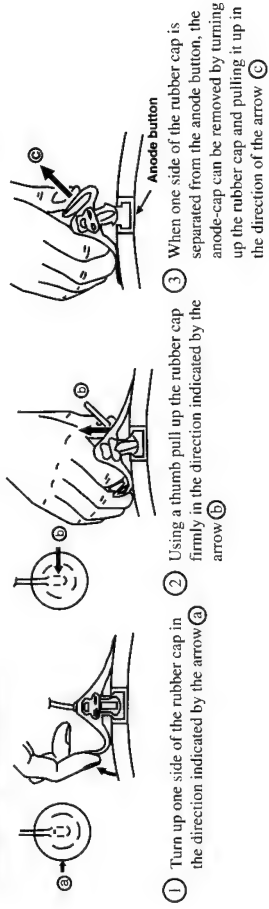
2-7. PICTURE TUBE REMOVAL



• REMOVAL OF ANODE-CAP

Note: Short circuit the anode of the picture tube and the anode cap to the metal chassis, CRT shield or carbon paint on the CRT, after removing the anode.

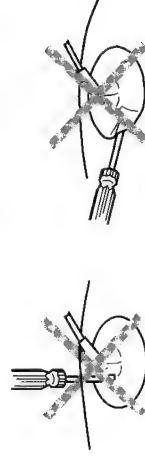
• REMOVING PROCEDURES.



• HOW TO HANDLE AN ANODE-CAP

- ① Don't damage the surface of anode-cap with sharp shaped material !
- ② Don't press the rubber hardly not to hurt inside of anode-caps !
- ③ Don't turn the foot of rubber over hardly !

The shatter-hook terminal will stick out or damage the rubber.



REMOVAL AND REPLACEMENT OF THE MAIN-BRACKET BOTTOM PLATES.

(1) REMOVING THE PLATES

In the event of servicing being required to the solder side of the D Board printed circuit, the bottom plates fitted to the main chassis bracket require to be removed. This is performed by cutting the gates with a sharp wire cutter at the locations shown and indicated by arrows.

Note : There are 5 plates fitted to the main bracket and secured by 4 or 6 gates. Only remove the necessary plate to gain access to the circuit board.

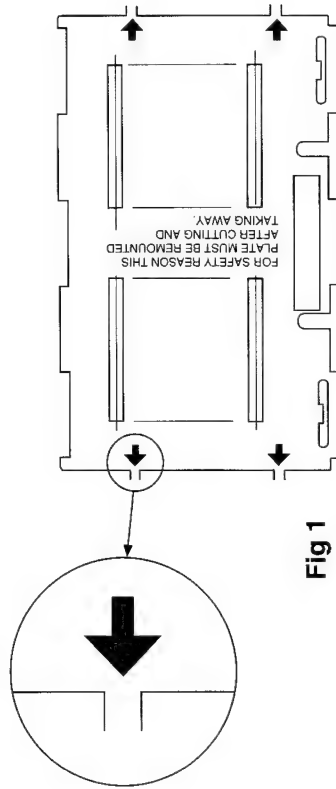


Fig 1

(2) REFITTING THE PLATES

Because the plates differ in size it is important that the correct plates are refitted in their original location.

The plates are identified by markings A-B-C-D-E on their top side.

1. Identify the plate by locating its marking.
2. Turn the plate over noting where the marking is located.
3. Locate the corresponding marking indicated on the main chassis bracket. See Fig 2.
4. Refit the plate as indicated in Fig 3 with the markings located next to each other.

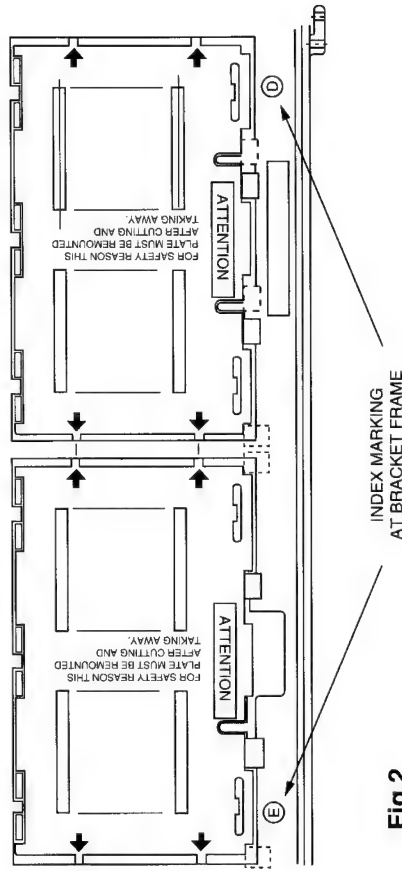


Fig 2

In the event of the plates requiring to be removed at a later stage, this can be achieved by inserting a screwdriver in the snap-recess indicated as in Fig 4 and lifting out.

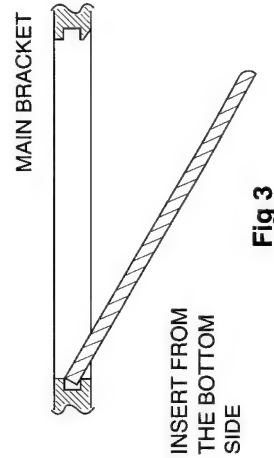


Fig 3

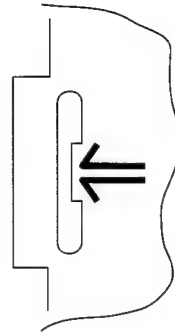


Fig 4

SECTION 3

SET - UP ADJUSTMENTS

- When complete readjustment is necessary or a new picture tube is installed, carry out the following adjustments.
- Unless there are specific instructions to the contrary, carry out these adjustments with the rated power supply.
- Unless there are specific instructions to the contrary, set the controls and switches to these settings :

● Contrast 80% (or remote control normal)
 ⚙ Brightness 50%

- Carry out the following adjustments in this order :

1. Beam landing
2. Convergence
3. Focus
4. White balance

Note: Testing equipment required.

1. Color bar/pattern generator
2. Degausser
3. DC power supply
4. Digital multimeter
5. Oscilloscope

Preparation:

- In order to reduce the influence of geomagnetism on the set's picture tube, face it east or west.
- Switch on the set's power and degauss with the degausser.

3-1. BEAM LANDING

- Input the white signal with the pattern generator.
 CONTRAST } normal
 BRIGHTNESS }
- Position neck assy as shown in Fig.3-2.
- Set the pattern generator raster signal to red.
- Move the deflection yoke forward and adjust with the purity control so that the red is at the centre and the green and the blue take up equally sized areas on each side. (See Fig. 3-1 - 3-3)
- Move the deflection yoke forward and adjust so that the entire screen becomes red. (See Fig. 3-1)
- Switch the raster signal to blue, then to green and verify the condition.
- When the position of the deflection yoke has been decided, fasten the deflection yoke with the screws.
- If the beam does not land correctly in all the corners, use a magnet to adjust it. (See Fig. 3-4)

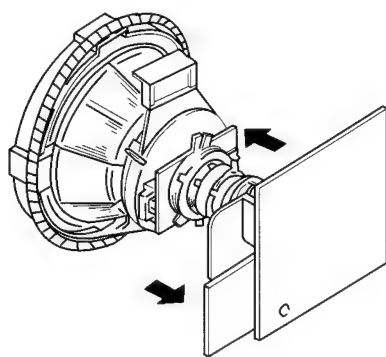


Fig. 3-1

Fig. 3-2

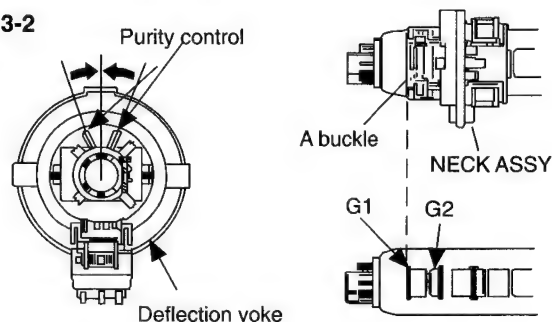


Fig. 3-3

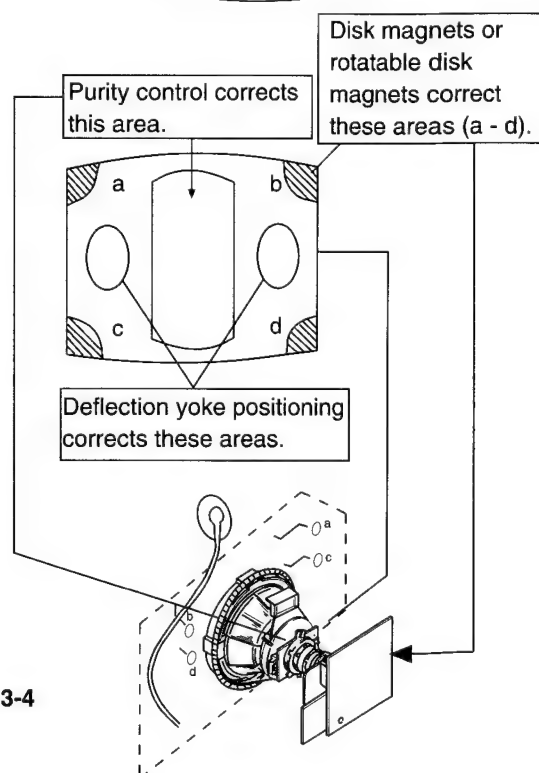
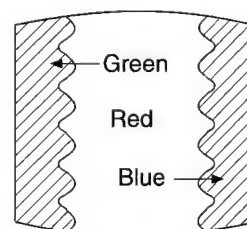


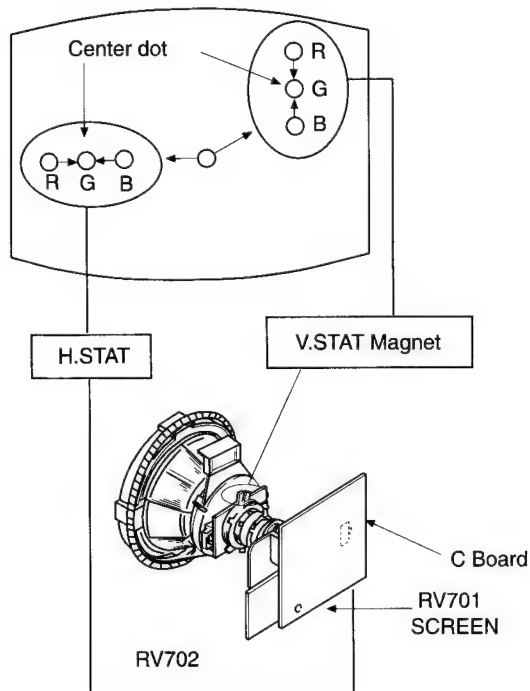
Fig. 3-4

3-2. CONVERGENCE

Preparation:

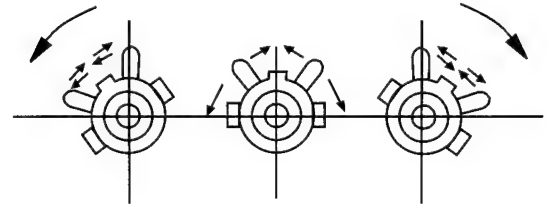
- Before starting this adjustment, adjust the focus, horizontal size, and vertical size.
- Minimize the brightness setting.
- Provide a dot pattern.

(1) Horizontal and vertical static convergence

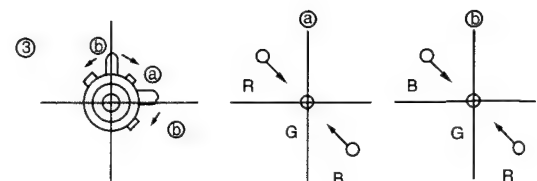
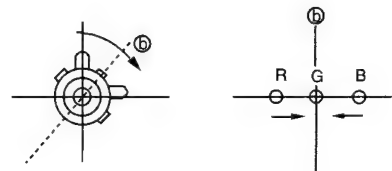
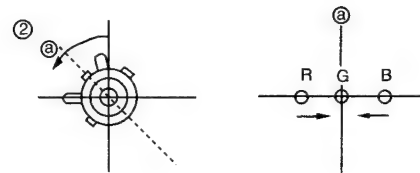
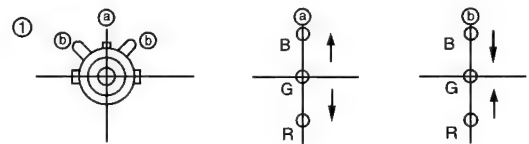


1. (Moving horizontally), adjust the H.STAT control so that the red, green, and blue points are on top of each other at the centre of the screen.
2. (Moving vertically), adjust the V.STAT magnet so that the red, green, and blue points are on top of each other at the centre of the screen.
3. If the H.STAT variable resistor cannot bring the red, green, and blue points together at the centre of the screen, adjust the horizontal convergence with the H.STAT variable resistor and the V.STAT magnet in the manner given below.
(In this case, the H.STAT variable resistor and the V.STAT magnet influence each other)

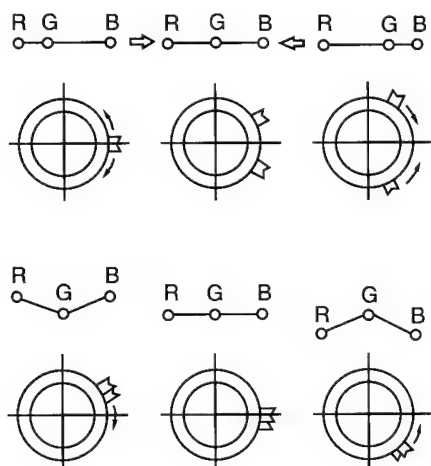
- Tilt the V.STAT magnet and adjust the static convergence by opening or closing the V.STAT magnet.



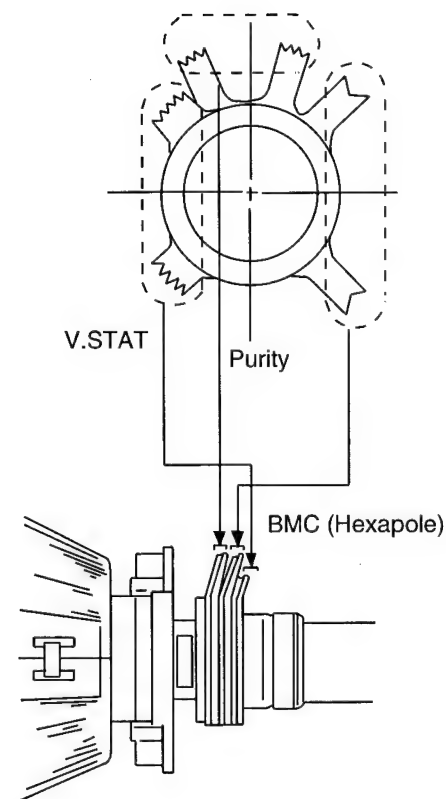
4. If the V.STAT magnet is moved in the direction of the (a) and (b) arrows, the red, green, and blue points move as shown below.



- Operation of BMC (Hexapole) Magnet



- The respective dot position resulting from moving each magnet interact, so be sure to perform adjustment while tracking.
Use the H.STAT VR to adjust the red, green, and blue dots so they coincide at the centre of the screen (by moving the dots in the horizontal direction).

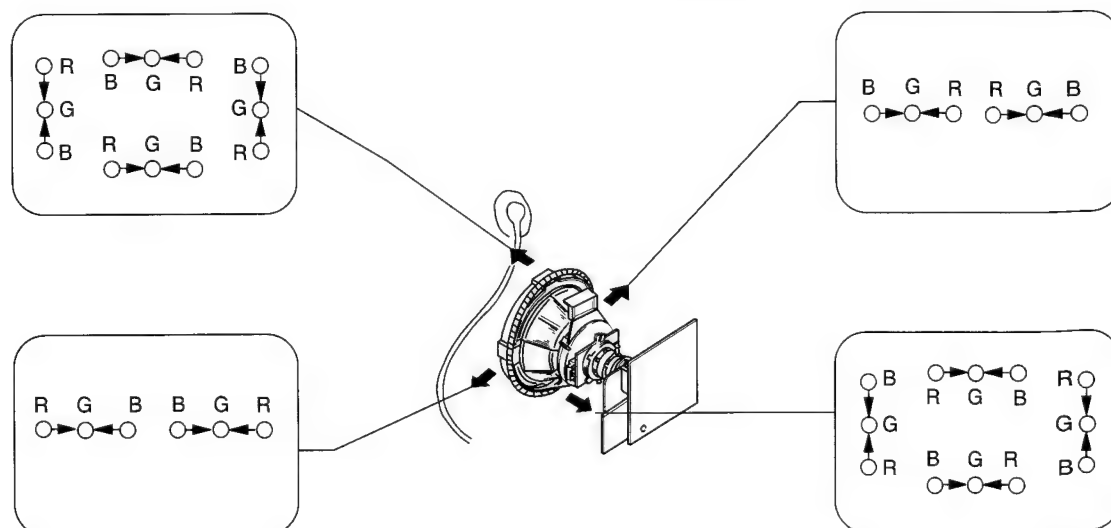


(2) Dynamic convergence adjustment.

Preparation:

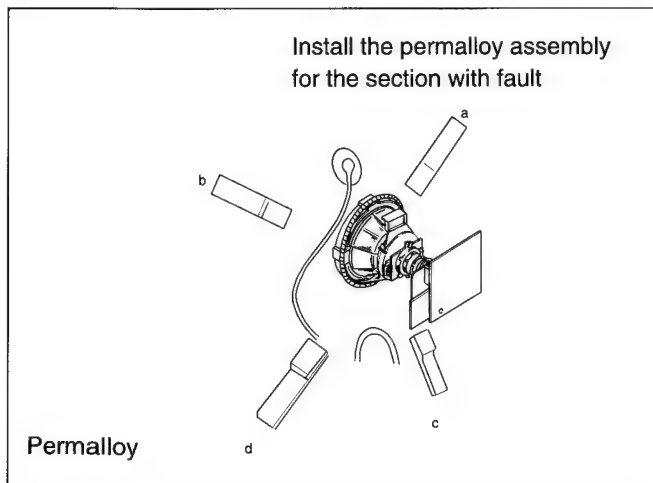
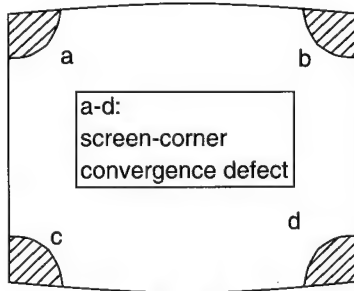
- Before starting this adjustment, adjust the horizontal static convergence and the vertical static convergence.
- Slightly loosen the deflection yoke screws.

- Remove the deflection yoke spacer.
- Move the deflection yoke as shown in the figure below and optimize the convergence.
- Tighten the deflection yoke screws.
- Re-install the deflection yoke spacer.



(3) Screen corner convergence.

If you are unable to adjust the corner convergence properly, correct them with the use of permalloy assemblies.

**3-3. WHITE BALANCE****G2 Setting**

1. Switch the set into AV mode (apply no signal to the AV connectors).
2. Connect a Volt Meter to Test Point 1 on the A board.
3. Adjust RV01 to obtain a voltage of $3.0V \pm 0.3V$.

White balance adjustment

1. Input an all white signal from the pattern generator.
2. Enter into the service mode.
3. Enter into Picture Adjustment service menu.
4. Select sub-contrast and adjust to 7.
5. Select the Green Drive and adjust so that the white balance becomes optimum.
6. Select the Blue Drive and adjust so that the white balance becomes optimum.
7. Press the TV button to return to TV operation.

PICTURE ADJUSTMENT

AFC mode	1
REF position	2
SCP BGR	1
SCP BGF	1
Trap Fo	0
Sub contrast	Adj
Sub colour	Adj
Sub brightness	Adj
Sub hue	Adj
Green drive	Adj
Blue drive	Adj
Green cutoff	Adj
Blue cutoff	Adj
Gamma	0
Pre / overshoot	0
Y delay	3

SECTION 4

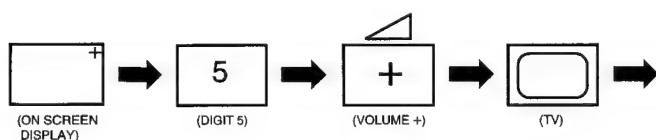
CIRCUIT ADJUSTMENTS

4-1. ELECTRICAL ADJUSTMENTS

Service adjustment to this model can be performed with the supplied remote commander RM-839.

HOW TO ENTER INTO SERVICE MODE

1. Turn on the main power switch of the set and enter into standby mode.
2. Press the following sequence of buttons on the Remote Commander.



"TT--" will appear in the top right corner of the screen. Other status information will also be displayed.

3. Press MENU on the commander to obtain the following menu on the screen.

TEST MENU

```

> Picture adjustment
  Geometry
  Wide
  MSP
  IC status
  Current TV status
  
```

4. Move to the corresponding adjustment using the ↓ button on the commander.
5. Press the + button to enter the selected adjustment.
6. Turn off the power to quit the service mode when adjustments are completed.

PICTURE ADJUSTMENT

AFC mode	1
REF position	3
SCP BGR	1
SCP BGF	1
Trap Fo	7
Sub contrast	Adj
Sub colour	Adj
Sub brightness	Adj
Sub hue	Adj
Green drive	Adj
Blue drive	Adj
Green cutoff	Adj
Blue cutoff	Adj
Gamma	0
Pre / overshoot	0
Y delay	5

GEOMETRY ADJUSTMENT

V Size	Adj
V Position	Adj
S Correction	Adj
V Linearity	Adj
H Size	Adj
H Position	Adj
Pin Amp	Adj
Pin Phase	Adj
AFC Bow	Adj
AFC Angle	Adj
EHT V	Adj
EHT H	Adj
Corner Pin	Adj

WIDE

V Aspect	43
V Scroll	31
Upper V Lin	0
Lower V Lin	0
Left Blanking	1
Right Blanking	11

MSP

AGC ON/OFF	ON
Constant gain CDB	0
FM prescale FMP	36
Zwei mono-st WHI	36
Zwei st-mono WLO	18
Zwei mono-bi WMH	36
Zwei bi-mono WLO	18
Time zwei WML	41
Fawct limit	10
Fawct soll init FAW	12
Fawer tol	2
Nicam Err Max CCT	10
Nicam Err Min	0
Nicam Prescale NIP	97
Time Nicam	31
Carrier mute CRM	OFF
Audio clock ACO	HIZ
Scart prescale	25
Scart volume	64

IC STATUS (CXA2000 / CXA2040)**CXA2000**

H lock	1
IKR	1
VNG	0
X-RAY	0
Colour system	3
CV1 Sync	1

CXA2040

Sync sep	1
S1 mode pin	01
S2 mode pin	01

TUNER

Tuner status	01101011
--------------	----------

TV STATUS

Text system	C TEXT/TV TEXT
Dolby	NO/YES
Text language set	WEST/EAST/RUSSIAN
Menu language set	WEST/EAST/RUSSIAN
Destination	B/D/U/K/L/E/A/R
Scart 16:9	OFF/ON
RGB priority	OFF/ON
Ageing	OFF/ON
Size	29/25
Colour trap sw	SECAM/ALL
Velocity mod	ON/OFF
AFT STATUS	WINDOW/HIGH/LOW

SUB BRIGHTNESS ADJUSTMENT

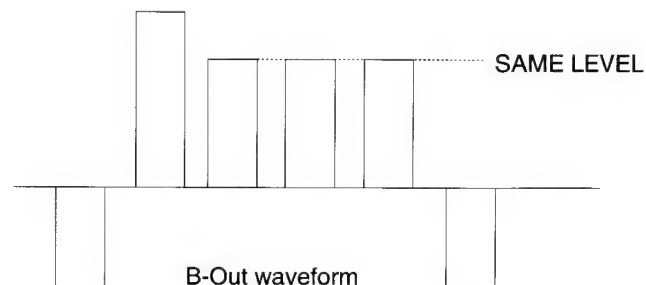
1. Input a Phillips pattern.
2. Set the picture control to minimum.
3. Enter into the Picture Adjustment Service Menu.
4. Adjust the Sub-Brightness data so that there is barely a difference between the 0 IRE and 10 IRE signal.

SUB CONTRAST ADJUSTMENT

1. Input a video that contains a small 100% area on a black background.
2. Set the picture control to maximum.
3. Connect an oscilloscope to pin 3 of CN301 (A board).
4. Enter into the Picture Adjustment Service Menu.
5. Adjust the Sub-contrast data to obtain a black to white amplitude of 2.50 volts.

SUB COLOUR ADJUSTMENT

1. Receive a PAL Colour Bar video signal.
2. Connect an oscilloscope to pin 3 of CN301 (A board).
3. Enter into the Picture Adjustment Service Menu.
4. Adjust the sub colour data so that cyan, magenta and blue colour bars are of equal height.



NOTE: The data shown in the TV STATUS table is dependant on destination, screen size and country.

SYSTEM B/G, D/K, I & L I.F ADJUSTMENT

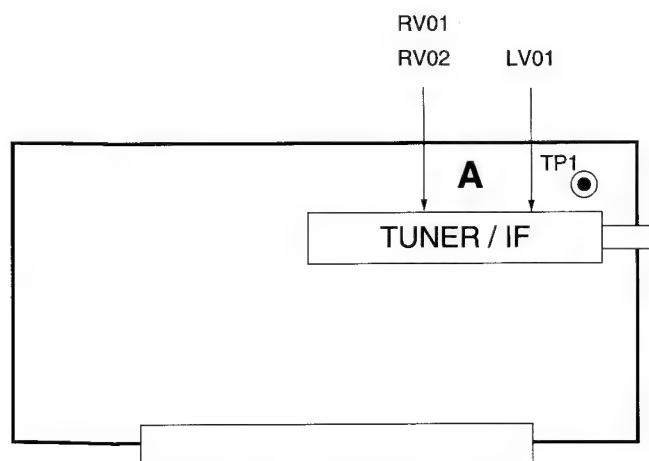
1. Input an off air signal of between 60-100dBuV / 75 ohm terminated, via the tuner socket.
2. Enter into the I.F adjustment service mode (i.e. " TT 59 ") to fix the I.F frequency to 38.9 MHz.
3. Enter into the service mode and select "Current TVStatus".
4. Adjust the I.F coil (LV01) until the "AFT Status" indicates a " Window " condition.

SYSTEM L BAND 1 I.F ADJUSTMENT

1. Input an off air signal of between 60-100dBuV / 75 ohm terminated, via the tuner socket.
2. Enter into the I.F adjustment service mode (i.e. " TT 59 ") to fix the I.F frequency to 34.2 MHz.
3. Enter into the service mode and select "Current TVStatus".
4. Adjust the RV02 until the "AFT Status" indicates a " Window " condition.

TUNER AGC ADJUSTMENT

1. Receive a signal of 63dBuV / 75 ohm terminated via the tuner socket.
2. Measure the voltage at test point 1 (A board).
3. Adjust RV01 to obtain a voltage of $3.0V \pm 0.3V$.



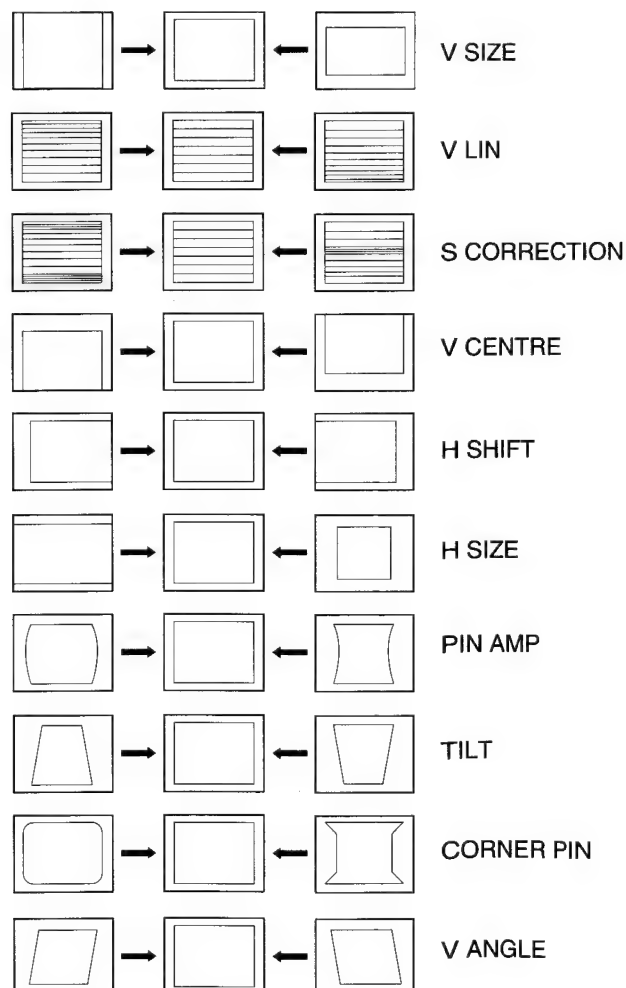
- A Board component side -

DEFLECTION SYSTEM ADJUSTMENT

1. Enter into the Geometry Adjustment Service Menu.
2. Select and adjust each item in order to obtain the optimum image.

GEOMETRY ADJUSTMENT

V Size	Adj
V Position	Adj
S Correction	Adj
V Linearity	Adj
H Size	Adj
H Position	Adj
Pin Amp	Adj
Pin Phase	Adj
AFC Bow	Adj
AFC Angle	Adj
EHT V	Adj
EHT H	Adj
Corner Pin	Adj



4-2. TEST MODE 2:

Is available by pressing Test button twice, OSD " TT " appears. The functions described below are available by pressing the two numbers. To release the Test mode 2, press 0 twice, or switch the TV into stand-by mode.

00	Switch test mode 2 off
01	Picture maximum
02	Picture minimum
03	Volume 30%
04	Set service menu mode
05	Set production menu mode
06	Volume 80%
07	Set ageing condition
08	Set shipping condition
09	Language reset
10	No function
11	Adjustment without OSD
12	Dummy
13	Display TV configuration
14	Forced AV 6:9 mode
15	Reset LPM from ROM data
16	copy LPM to reset memory
17	Preset label for AV sources
18	RGB priority on/off
19	Clear all preset labels
20	No function
21	Sub contrast
22	Sub colour
23	Sub brightness
24	Set destination = U
25	Set destination = D
26	Set destination = B
27	Set destination = K
28	Set destination = L
29	Set destination = E
30	No function
31	Set destination =A
32	Dummy
33	Auto AGC
34	Dummy
35	Manual AGC adjust

36-40	Dummy
41	Re-initialise NVM
42	Production use only
43	Initialise geometry settings
44	Initialise all favourite pages = 100
45	Channel locks = off
46	Dealer commander mode
47	Default MSP settings
48	Restore NVM test byte
49	Delete NVM test byte
50-60	No function
61	Turn on Dolby Pro Logic mode
62	White noise to left speaker
63	White noise to right speaker
64	White noise to centre speaker
65	White noise to rear speaker
66	Set standard stereo mode
67	Set Pro Logic normal mode
68	Set Pro Logic wide mode
69	Set Pro Logic phantom mode
70	No function
71	Picture rotation on/off
72	Dolby register settings
74	No function
75	Reset picture colour balance
76	Reset picture geometry
77	Reset sound settings
78	Reset error codes in the NVM
79-99	No function

4-3. BE-3D SELF DIAGNOSTIC SOFTWARE

The identification of errors within the BE-3D chassis is triggered in 1 of 2 ways :- 1: Bus busy or 2: Device failure to respond to IIC. In the event of one of these situations arising the software will first try to release the bus if busy (Failure to do so will report with continuous flashing LED) and then communicate with each device in turn to establish if a device is faulty. If a device is found to be faulty the relevant device number will be displayed through the led (Series of flashes which must be counted) See Table 1, non fatal errors are reported with this method.

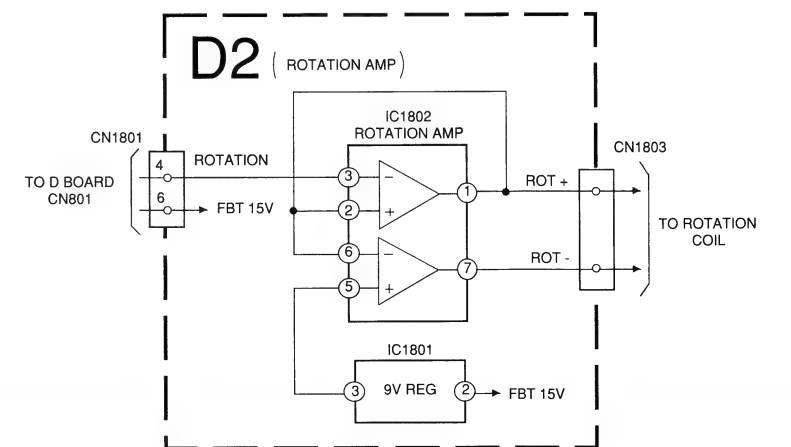
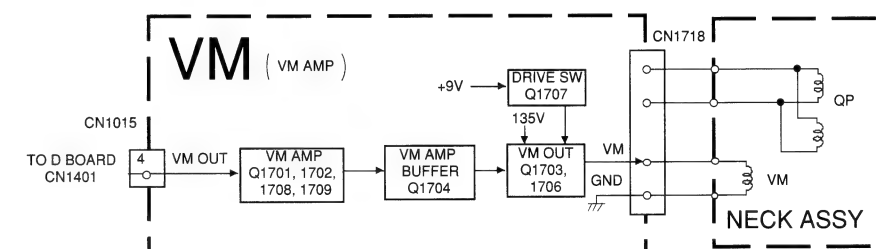
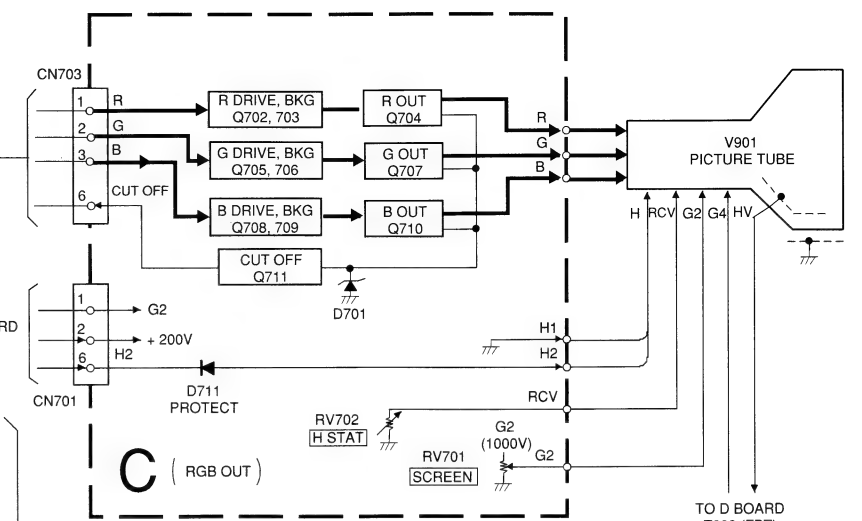
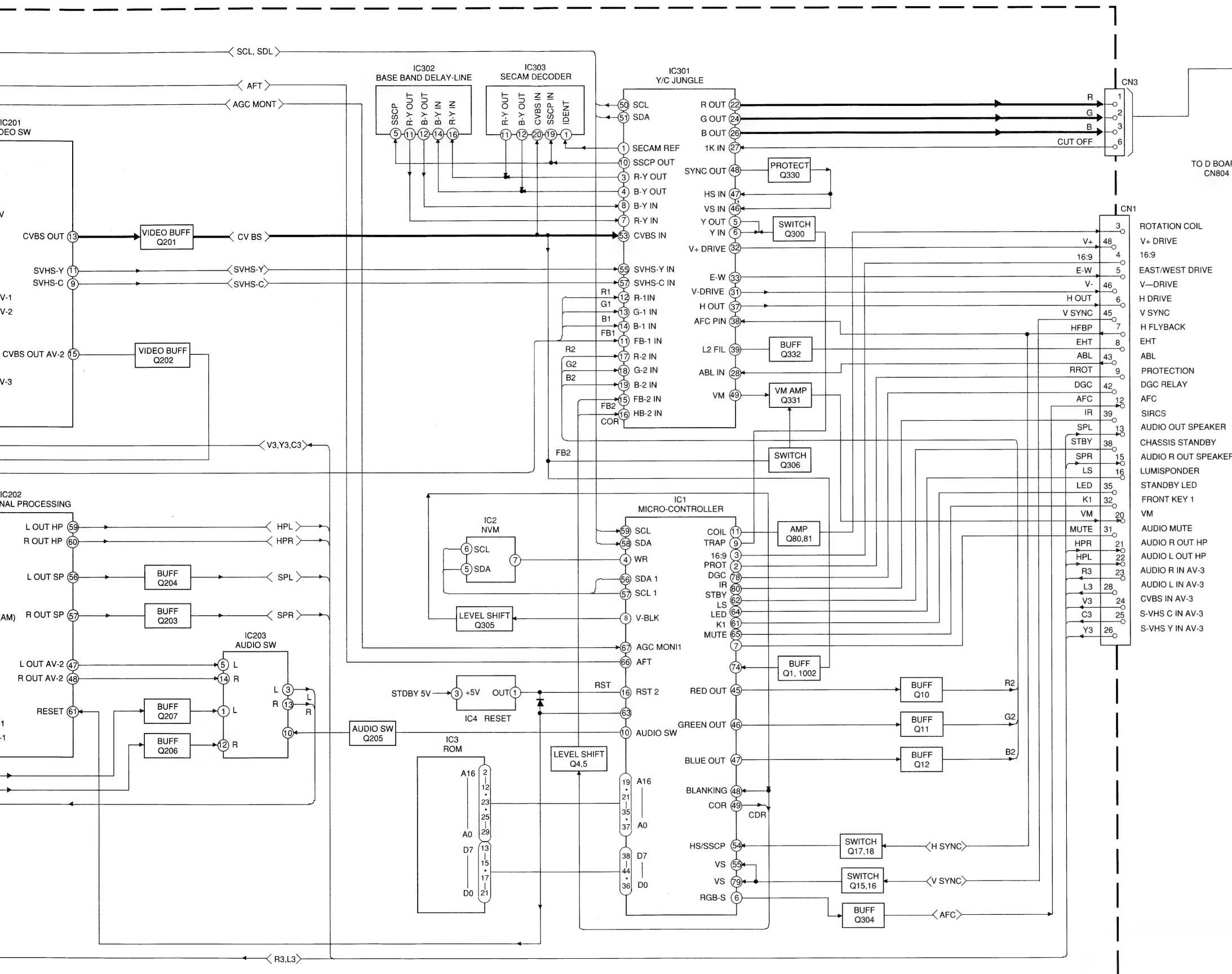
Table 1

ERROR	LED ERROR COUNT
Protection circuit trip < ANY TIME >	02
IIC SCL LOW < POWER UP ONLY >	03
IIC SDA LOW < POWER UP ONLY >	04
IIC SDA & SCL LOW < POWER UP ONLY >	05
Jungle/Choroma controller no acknowledge < POWER UP ONLY >	06
Video Switch no acknowledge < POWER UP ONLY >	07
Tuner no acknowledge	08
MSP no acknowledge	09
NVM no acknowledge	10
M3L TXD LOW < POWER UP ONLY >	11
M3L RXD LOW < POWER UP ONLY >	12
M3L ENABLE LOW < POWER UP ONLY >	13
M3L TXD & RXD LOW < POWER UP ONLY >	14
Compact Text test fail < POWER UP ONLY >	15
AV switch cannot power on reset	16
Cannot initialise jungle	17
NVM acknowledge fail after initialisation	18
Multiple devices with no acknowledge < POWER UP ONLY >	19
Compacttext run-time failure	20
AVSWITCH response failure after power up	21
JUNGLE/CHROMA controller response failure after power up	22
CompactText does not respond	23

Flash Timing Example : e.g. error number 3.

Stby LED



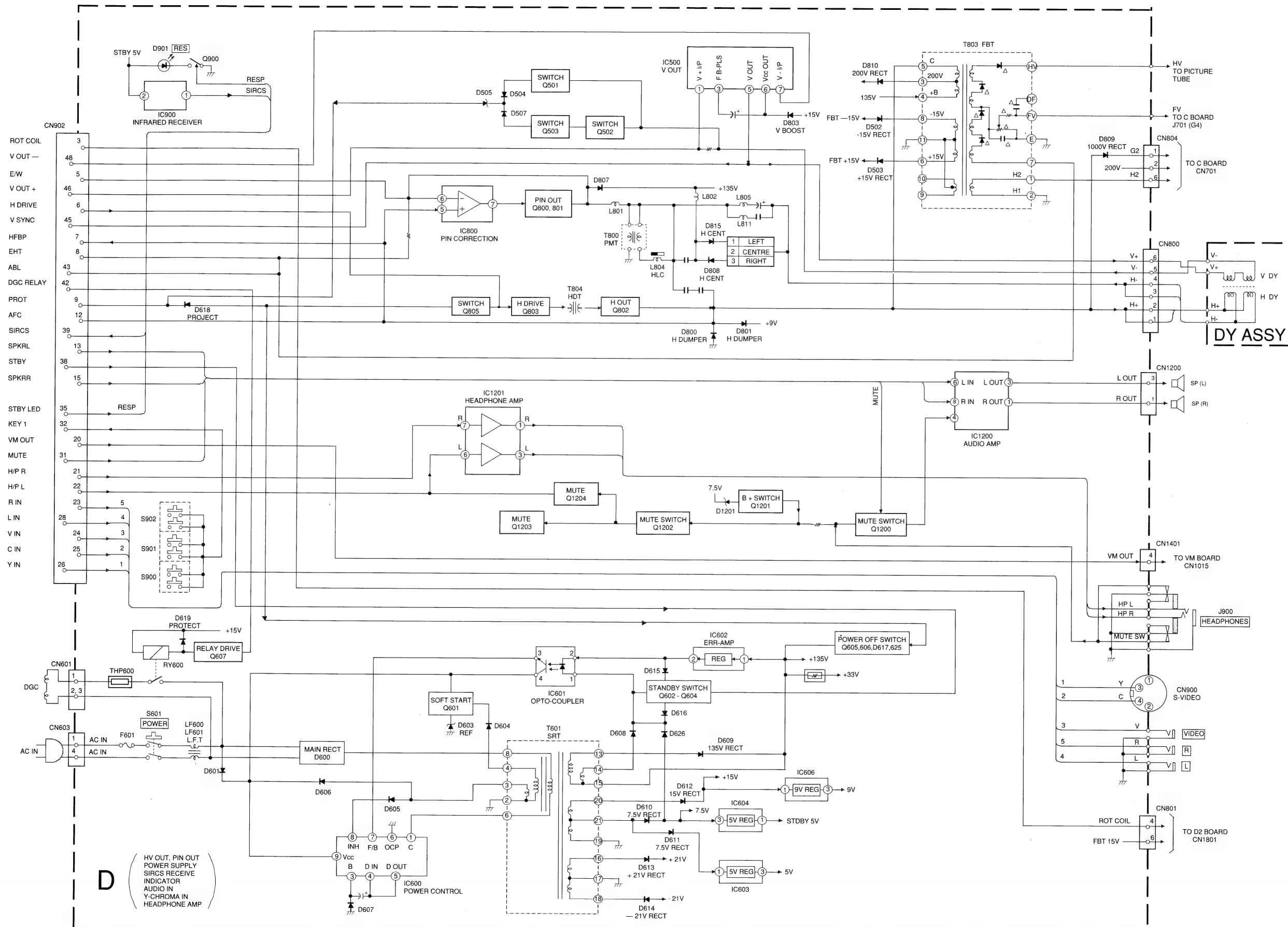


SECTION 5 DIAGRAMS

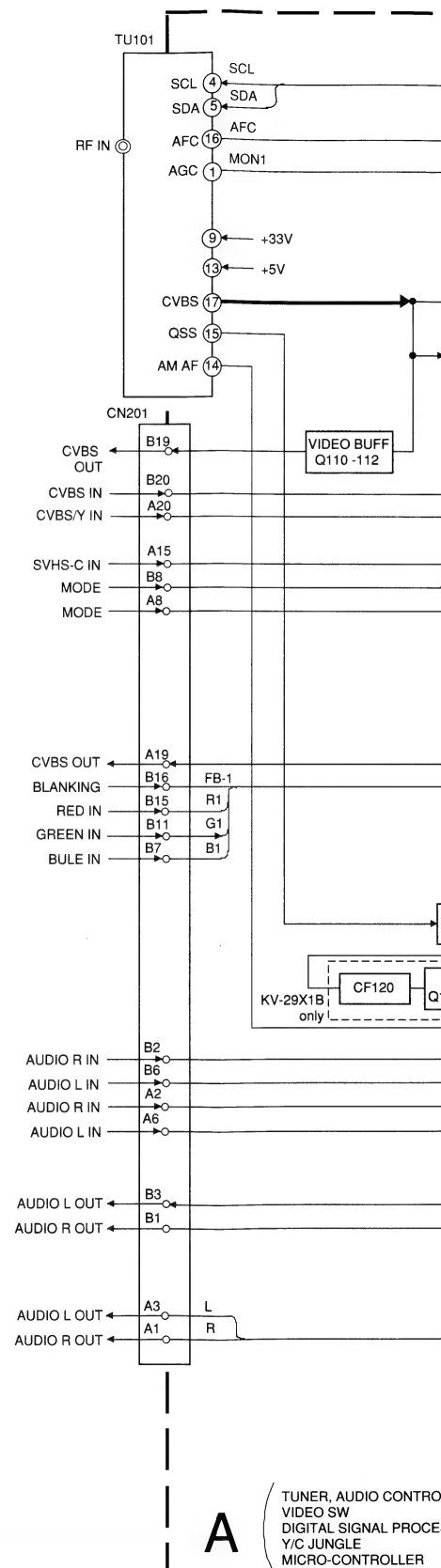
KV-29X1

KV-29X1

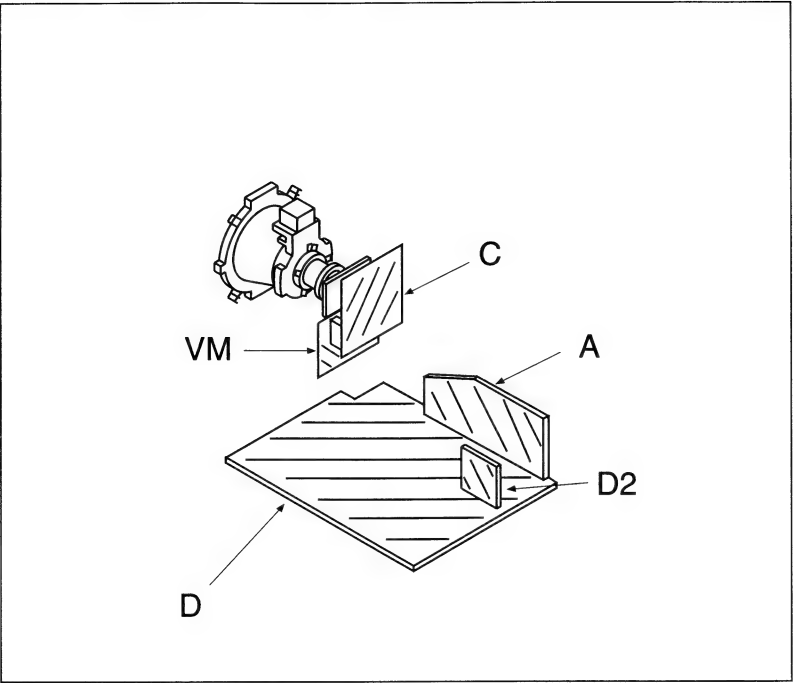
5-1. BLOCK DIAGRAM (1)



BLOCK DIAGRAM (2)



5-2. CIRCUIT BOARDS LOCATION



5-3. SCHEMATIC DIAGRAMS AND PRINTED WIRING BOARDS

Note :

- All capacitors are in μF unless otherwise noted. pF: μpF
50WV or less are not indicated except for electrolytic and tantalums.
- All resistors are in ohms.
k = 1000 , M = 1000K
- Indication of resistance, which does not have one for rating electrical power, is as follows.

Pitch : 5 mm
Rating electrical power $\frac{1}{4}$ W

- : nonflammable resistor.
- : internal component.
- : panel designation, or adjustment for repair.
- All variable and adjustable resistors have characteristic curve B, unless otherwise noted.
- \perp : earth - ground.
- /// : earth - chassis.
- $\#$: no mounted.

Note : The components identified by shading and marked are critical for safety. Replace only with the part number specified.

Note : Les composants identifiés par une trame et une marque sont critiques pour la sécurité. Ne les remplacer que par une pièce portant le numéro spécifié.

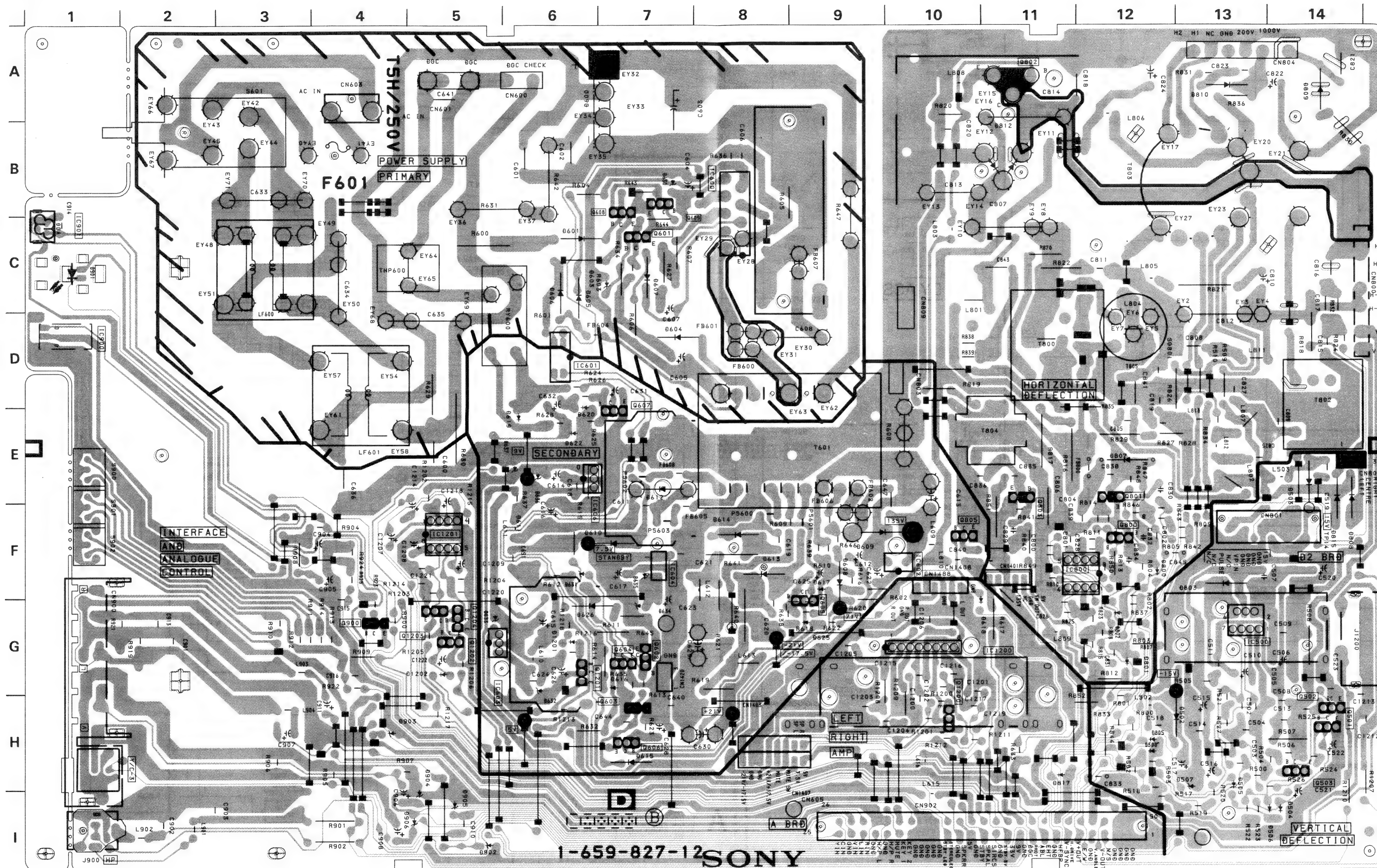
Reference information

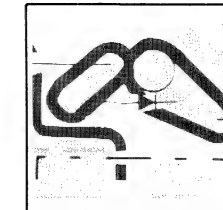
RESISTOR	: RN	METAL FILM
	: RC	SOLID
	: FPRD	NONFLAMMABLE CARBON
	: FUSE	NONFLAMMABLE FUSIBLE
	: RS	NONFLAMMABLE METAL OXIDE
	: RB	NONFLAMMABLE CEMENT
	: RW	NONFLAMMABLE WIREWOUND
	: \times	ADJUSTABLE RESISTOR
	: LF-8L	MICRO INDUCTOR
	: TA	TANTALUM
CAPACITOR	: PS	STYROL
	: PP	POLYPROPYLENE
	: PT	MYLAR
	: MPS	METALIZED POLYESTER
	: MPP	METALIZED POLYPROPYLENE
	: ALB	BIPOLAR
	: ALT	HIGH TEMPERATURE
	: ALR	HIGH RIPPLE

- Readings are taken with a colour-bar signal input.
- Readings are taken with 10M Ω digital multimeter.
- Voltages are dc with respect to ground unless otherwise noted.
- Voltage variations may be noted due to normal production tolerances.
- All voltages are in V.
- Circled numbers are waveform references.
- : B+ bus.
- : signal path. (RF)

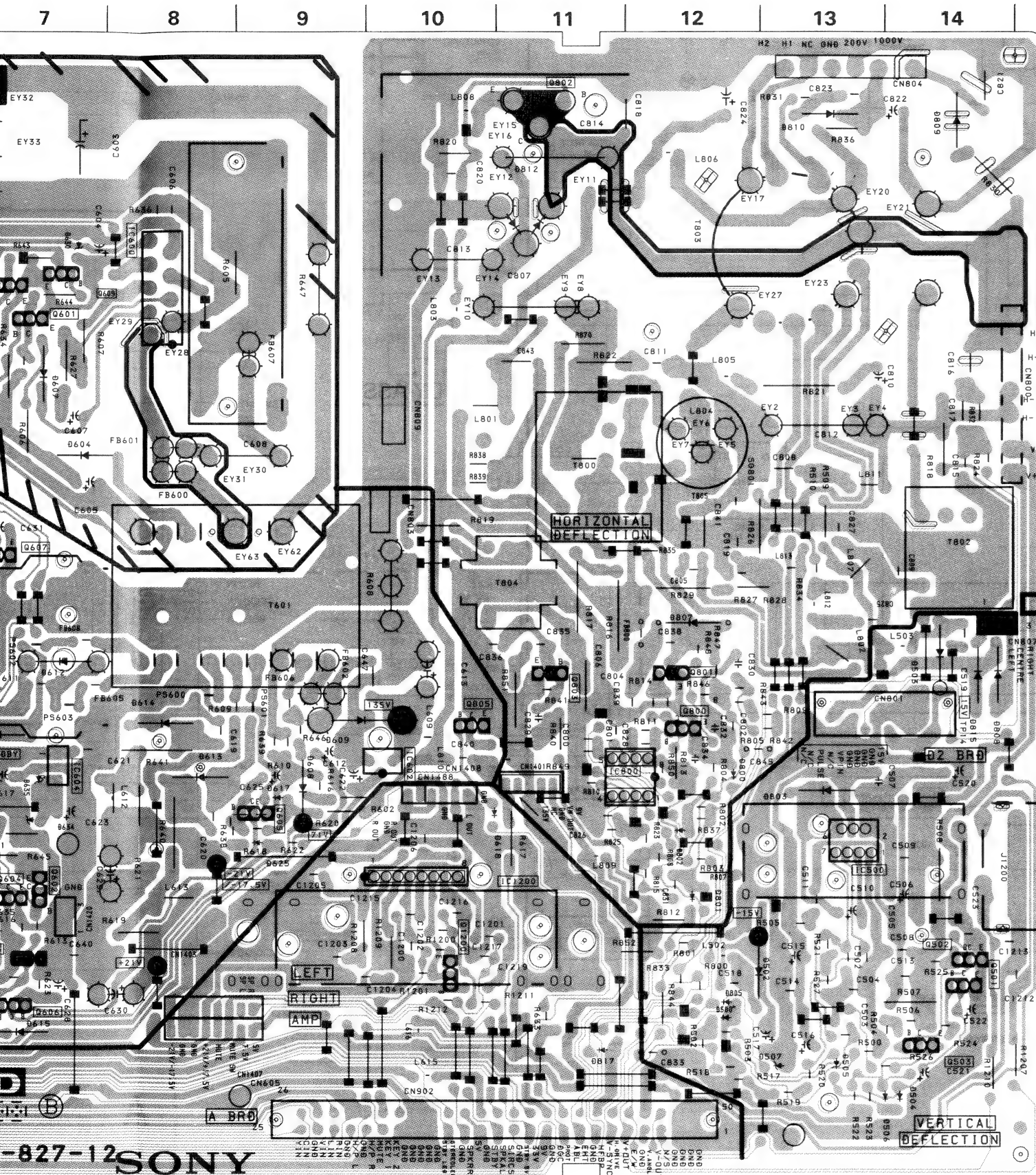
D [HV OUT, PIN OUT, POWER SUPPLY, CONTROL SW, AUDIO IN
Y-CHROMA IN, HEADPHONE IN, SIRCS RECEIVE, INDICATON]

D Board

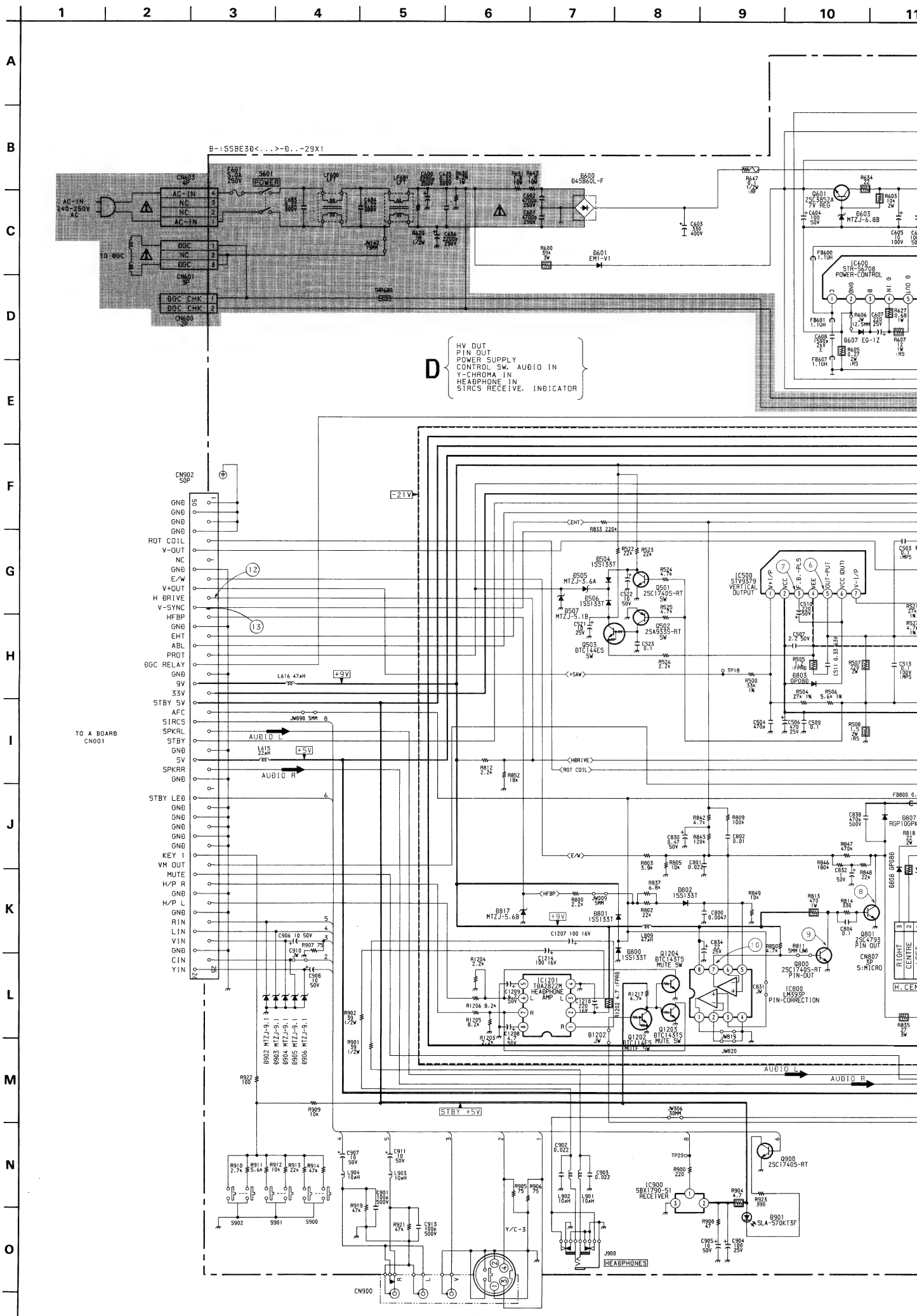


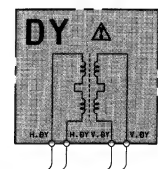
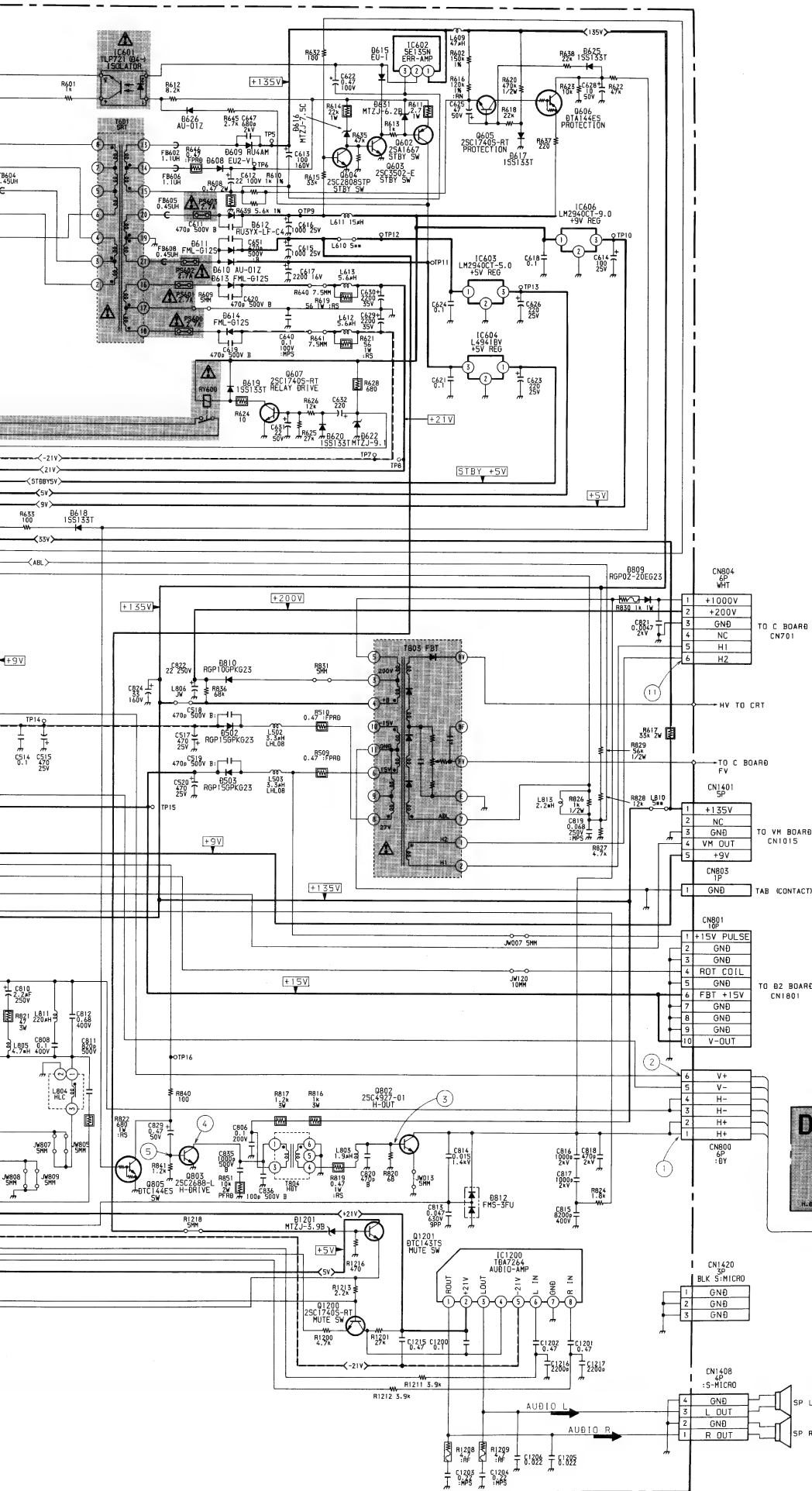
**NOTE:**

The circuit indicated as left contains high voltage of over 600 Vp-p. Care must be paid to prevent an electric shock in inspection or repairing.

**D BOARD**

IC		DIODE	
IC500	G-13	D600	A-7
IC600	B-8	D601	C-6
IC601	D-6	D603	C-7
IC602	F-10	D604	D-7
IC603	G-5	D605	C-6
IC604	F-7	D606	C-6
IC606	E-6	D607	C-7
IC800	F-12	D608	F-9
IC900	D-1	D609	F-9
IC1200	G-10	D610	F-7
IC1201	F-5	D611	F-6
		D612	E-7
		D613	F-8
		D614	F-8
		D615	H-7
		D616	G-7
		D617	F-9
		D618	F-11
		D619	E-6
		D620	E-6
		D622	E-6
		D625	G-9
		D626	G-6
		D631	F-6
		D800	F-12
		D801	G-12
		D802	G-12
		D803	F-13
		D807	E-12
		D808	E-14
		D809	A-14
		D810	A-13
		D812	B-11
		D815	E-14
		D817	H-11
		D901	C-1
		D902	I-5
		D903	H-4
		D904	H-5
		D905	I-5
		D906	I-5
		D1201	G-6



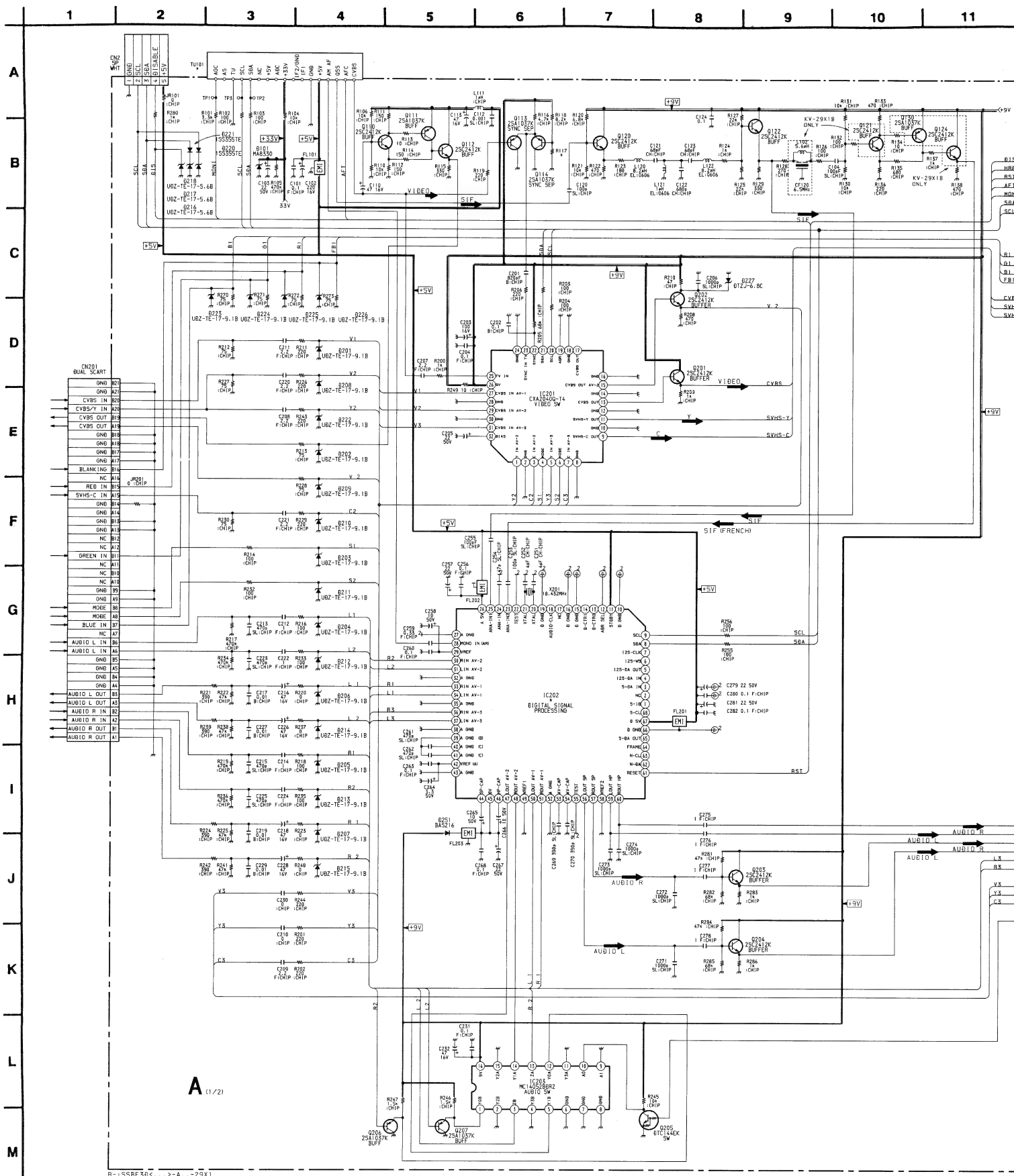


D BOARD
TRANSISTOR VOLTAGE TABLE

Transistor Voltage Table			
Ref No	B Base	C Collector	E Emitter
Q501	-0.1	0.2	-
Q502	0.1	-5.8	-
Q503	-5.8	-12.0	-12.0
Q602	72.0	7.5	72.7
Q603	0	72.0	-
Q604	0.7	-	-
Q605	0.5	-	0.3
Q606	-	-	12.0
Q607	-	12.0	-
Q800	0.2	3.1	-
Q801	0.3	17.0	-
Q802	-0.2	143.3	-
Q803	-0.6	99.8	-
Q805	-	3.6	-
Q900	-	5.4	-
Q1200	2.9	21.5	4.6
Q1201	3.4	5.0	3.0
Q1202	2.8	-	-

D BOARD IC VOLTAGE TABLE

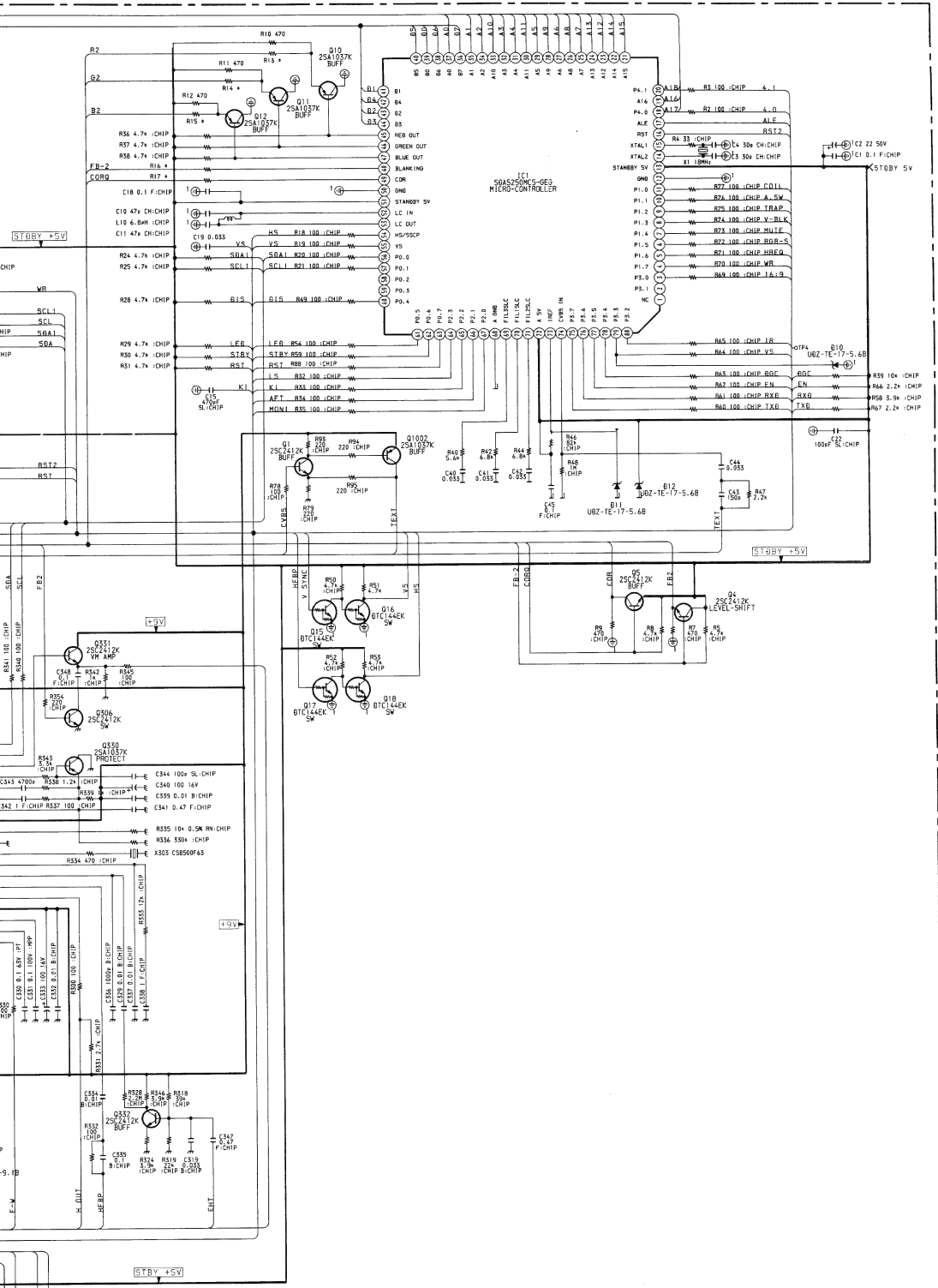
IC Voltage Table		
Ref No	Pin No	Voltage (V)
IC500	1	1.5
	2	15.0
	3	-12.3
	4	-14.0
	5	0.1
	6	15.2
	7	1.4
IC600	1	170.0
	2	-62.4
	3	-62.6
	4	-62.2
	5	-62.0
	6	-62.6
	7	-62.4
	8	-62.0
	9	-58.0
IC601	1	64.3
	2	63.0
	3	-62.5
	4	-58.6
IC602	1	135.0
	2	63.2
	3	-0.1
IC800	3	0.9
	5	1.5
	6	2.0
	7	0.2
	8	9.0
IC1200	2	21.7
	4	21.5
	5	-21.7
IC1201	1	4.0
	2	9.0
	3	4.0
	5	0.5
	8	0.5



A BOARD * MARK

Model	29X1A	29X1B	29X1D	29X1E	29X1K	29X1L	29X1R	29X1U
Ref. No.	—	—	—	—	—	—	—	—
C370	—	2.2UF	2.2UF	2.2UF	2.2UF	—	2.2UF	—
C372	—	0.1UF	0.1UF	0.1UF	0.1UF	—	0.1UF	—
C373	—	0.22UF	0.22UF	0.22UF	0.22UF	—	0.22UF	—
D370	—	BAS216	BAS216	BAS216	BAS216	—	BAS216	—
IC3	TMS27PC010A-15FMBE101	TMS27PC010A-15FMBE101	TMS27PC010A-15FMBE101	TMS27PC010A-15FMBE101	TMS27PC010A-15FMBE101	TMS27PC010A-15FMBW101	TMS27PC010A-15FMBE101	TMS27PC010A-15FMBW101
IC202	MSP3400C-PS	MSP3410-15	MSP3400C-PS	MSP3410-15	MSP3400C-PS	MSP3410-15	MSP3400C-PS	MSP3410-15
IC203	—	TDA8395T	TDA8395T	TDA8395T	TDA8395T	—	TDA8395T	—
R13	150	—	150	150	150	150	150	150
R14	150	—	150	150	150	150	150	150
R15	150	—	150	150	150	150	150	150
R16	100	—	100	100	100	100	100	100
R17	100	—	100	100	100	100	100	100
R117	1.8K	1.8K	1.8K	1.8K	1.8K	1.8K	1.8K	2.0K
TU101	TUVIF (AEP)	TUVIF (FR)	TUVIF (AEP)	TUVIF (AEP)	TUVIF (AEP)	TUVIF (AEP)	TUVIF (AEP)	TUVIF (UK)





A (1/2) BOARD IC VOLTAGE TABLE

IC Voltage Table		
Ref No	Pin No	Voltage (V)
IC201	13	4.4
	15	4.4
	20	3.5
	21	2.7
	22	4.9
	23	4.4
	24	0
	25	4.4
	26	8.8
	32	4.4
	4	2.8
	6-7	0.1
IC202	8	3.0
	9	3.6
	11	4.7
	13	4.7
	20-21	2.4
	23	0.2
	25	1.5
	26	4.8
	28	3.8
	29	2.6
	39-42	3.8
	44	7.1
	45	8.0
	46	7.1
	47-48	3.8
	53-54	3.8

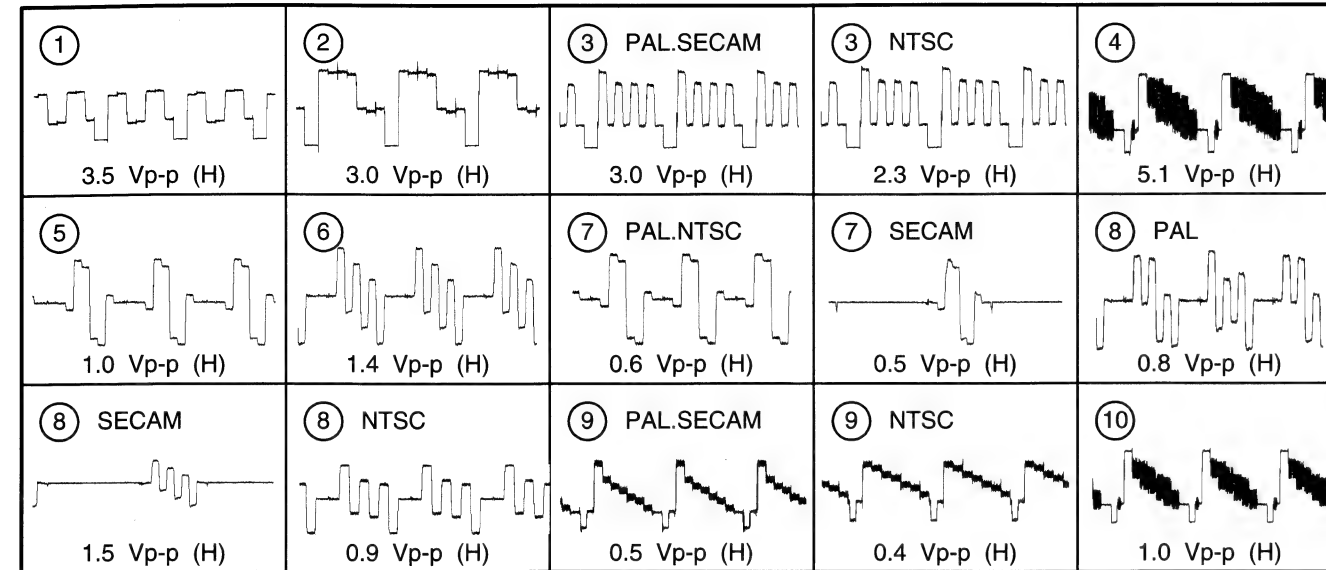
A (2/2) BOARD TRANSISTOR VOLTAGE TABLE

Transistor Voltage Table			
Ref No	B Base	C Collector	E Emitter
Q1	3.7	4.8	3.1
Q4	0.1	4.8	-
Q5	0.7	4.8	4.0
Q15	-	4.3	-
Q16	4.3	0.2	-
Q17	0.4	3.5	-
Q18	3.5	0.7	-
Q80	2.6	2.2	-
Q81	2.4	-	3.0
Q304	-	4.8	-
Q305	-	4.8	-
Q330	4.5	-	5.1
Q331	6.3	8.8	5.7
Q332	3.1	8.8	2.5
Q1001	4.4	-	-

A (1/2) BOARD TRANSISTOR VOLTAGE TABLE

Transistor Voltage Table			
Ref No	B Base	C Collector	E Emitter
Q110	1.8	8.2	1.2
Q112	1.5	8.8	0.8
Q113	1.8	-	-
Q114	5.4	6.0	-
Q120	84.3	8.8	3.7
Q121	1.5	5.4	0.9
Q122	5.4	8.8	4.7
Q124	-	8.8	-
Q201	4.4	8.8	3.7
Q202	4.4	8.8	3.7

WAVEFORMS A BOARD



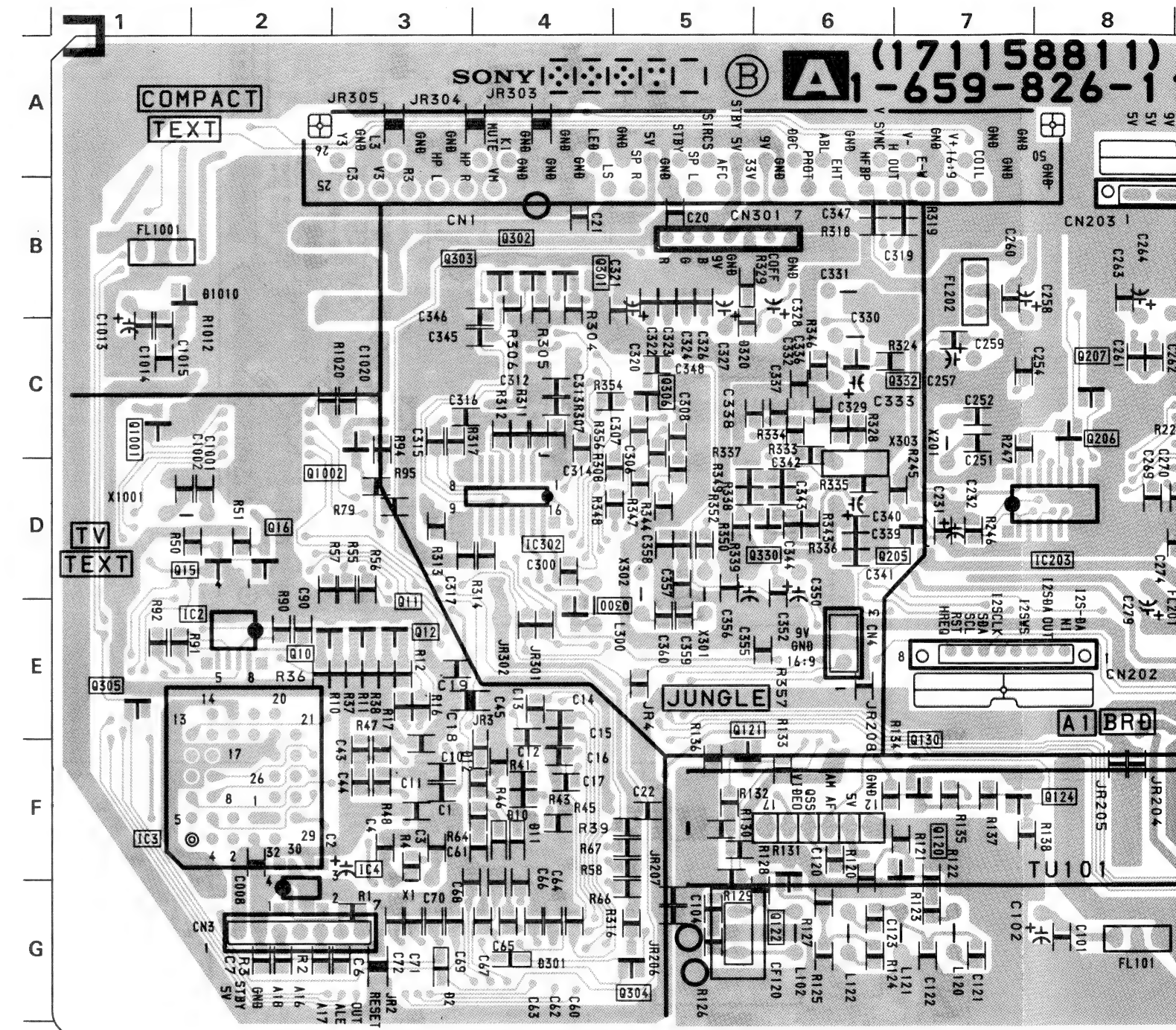
A (2/2) BOARD IC VOLTAGE TABLE

IC Voltage Table								
Ref No	Pin No	Voltage (V)	Ref No	Pin No	Voltage (V)	Ref No	Pin No	Voltage (V)
IC1	2	3.6	IC301	5	3.6	IC301	61	5.0
	3-4	4.8		6	5.0		62	7.6
	5	0.5		7-8	5.4		1	4.8
	7	4.8		10	0.6		5	0.7
	9	4.8		12-14	5.4		9	4.8
	11	2.4		16	4.0		11-12	3.0
	13	4.8		17-19	5.4		14	1.3
	14-15	2.3		20	8.8		16	1.3
	16-17	4.8		22-23	2.2		5	8.0
	48	4.0		24	2.0		3-2	10
	51	4.8		25	2.4		11	5.6
	52-53	2.4		26	2.0		0	19
	54	0.7		27	4.0		20	3.7
	55	0.2		28	6.6		4	0.2
	56-57	4.8		29	8.8		5	0.7
	58	2.8		31-33	3.0		4	0.2
	59	3.5		34	4.0		5	0.7
	60	2.4		35	4.6		6	1.7
	62	0.7		36	8.8		7	1.8
	63	4.4		37	3.1		10	0.4
	65	4.8		38	3.4		11-12	4.8
IC2	66	2.1		39	5.3	IC303	16	4.8
	67	2.0		40	4.2		17	0
	69-71	2.3		41	2.3		21	4.8
	72	4.8		43	1.7		23	3.0
	73	1.5		44	8.8		25	4.8
	74	1.2		45	2.5		56	0
	75-77	4.8		46	3.9		61	1.3
	79	0.2		47	3.0		62-63	1.4
	80	4.8		48	4.4		64	0
				49	6.3		66	4.6
IC3	1	4.8		50-51	0.1	IC1001	67	4.7
	31-32	4.8		53	3.9		68	4.0
IC4	1	4.8		54	5.0			
	3	4.8		55-56	4.2			
IC301	1	1.5		58-59	8.8			
	3-4	5.6		60	5.3			

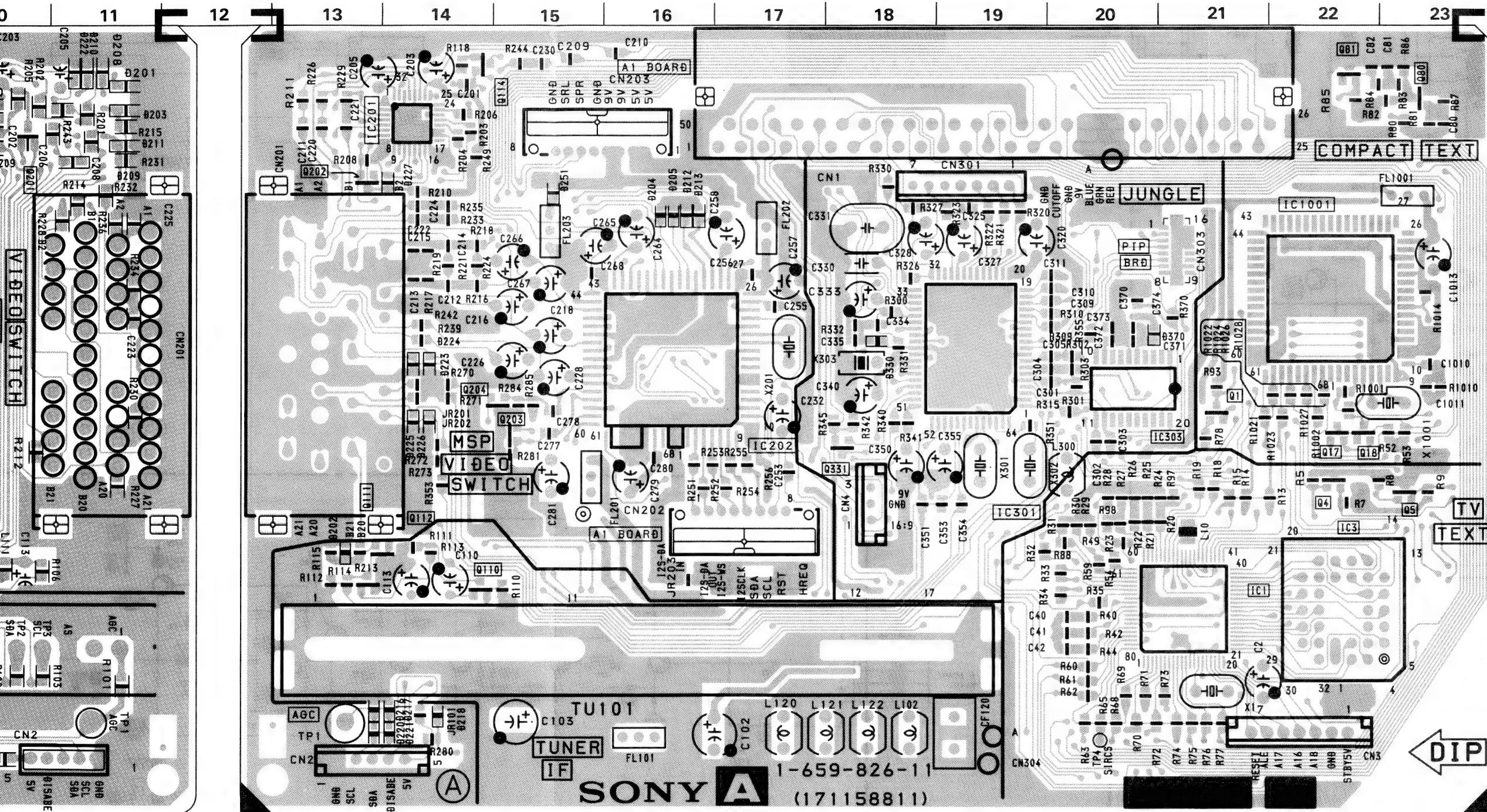
A

TUNER, AUDIO CONTROL VIDEO SW, DIGITAL SIGNAL PROCESSING
Y/C JUNGLE MICRO CONTROLLER

A Board <Conductor Side>

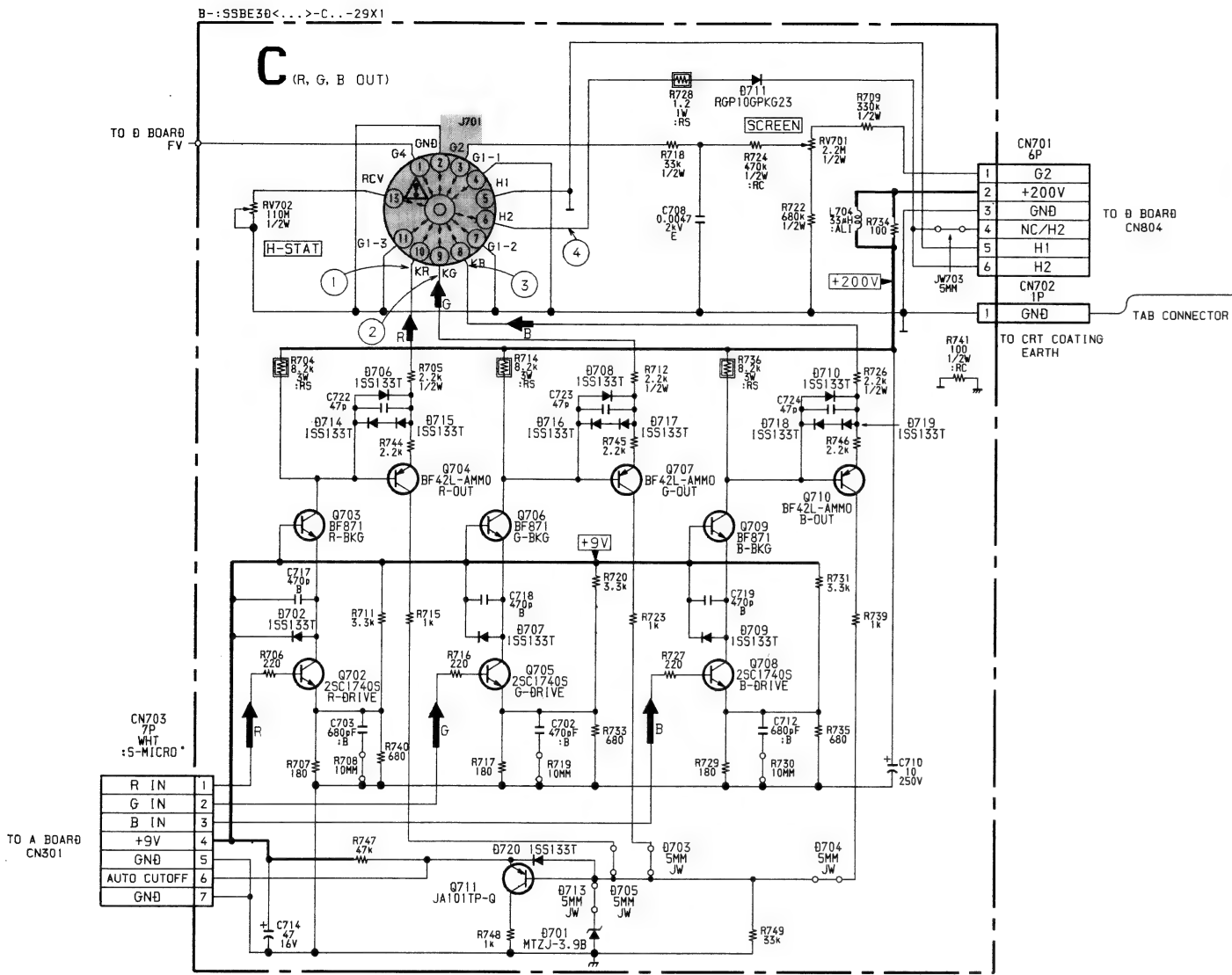


A Board <Component Side>

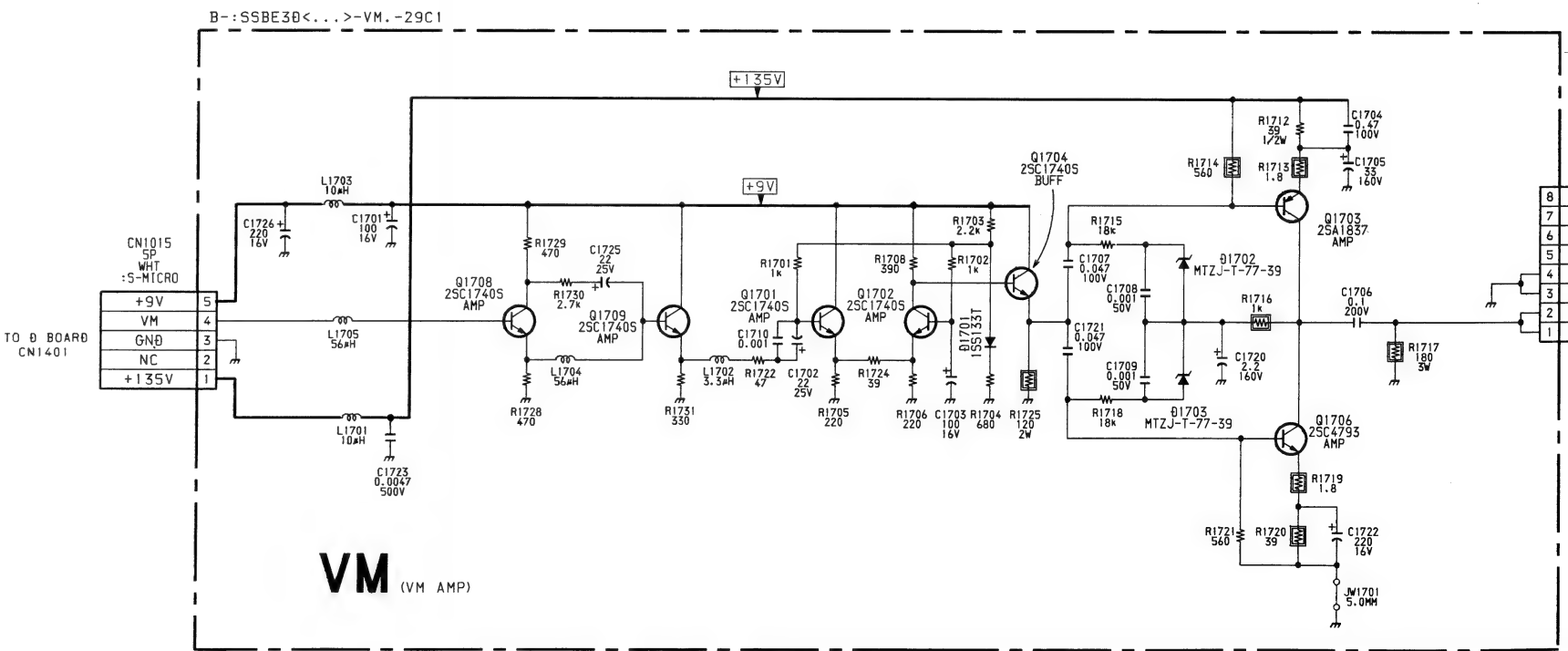
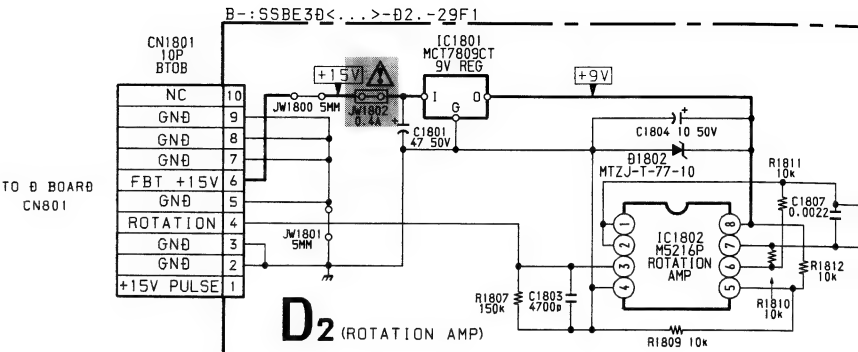
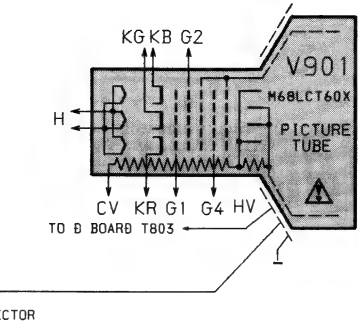
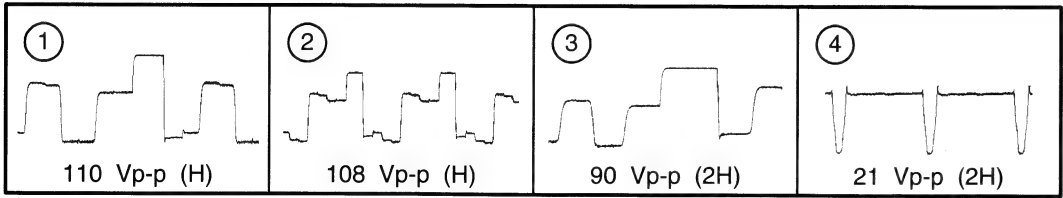


A BOARD

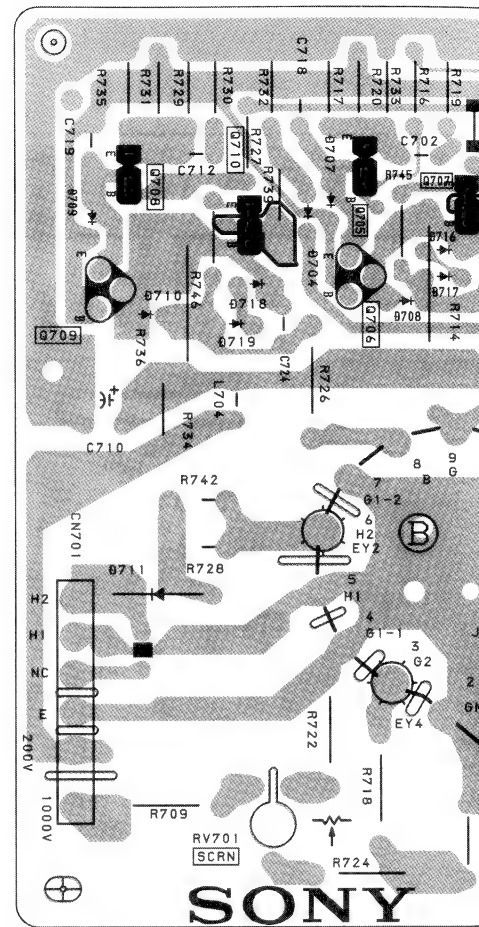
IC		Q305 E-1	
IC1	F-21	Q306	C-5
IC2	E-2	Q330	D-6
IC3	F-2	Q331	D-18
IC4	G-2	Q332	C-6
IC201	A-14	Q1002	C-3
IC202	C-16	DIODE	
IC203	D-8	D2	G-3
IC301	C-19	D10	F-10
IC302	D-4	D11	F-10
IC303	D-21	D12	F-4
TRANSISTOR		D101	F-9
Q1	D-21	D201	A-11
Q4	E-22	D202	E-13
Q5	E-23	D203	A-11
Q10	E-2	D204	B-16
Q11	E-3	D205	B-16
Q15	D-2	D206	C-9
Q16	D-2	D207	C-9
Q17	D-22	D208	A-11
Q18	D-23	D209	B-11
Q80	A-23	D210	A-11
Q81	A-22	D211	B-11
Q110	F-14	D212	B-16
Q111	E-14	D213	B-16
Q112	E-14	D214	D-9
Q113	A-10	D215	D-9
Q114	A-14	D216	G-14
Q120	F-7	D217	G-14
Q121	F-5	D218	G-14
Q122	F-6	D220	G-14
Q124	F-7	D221	D-14
Q130	F-7	D222	D-14
Q201	B-10	D223	D-14
Q202	B-13	D224	D-14
Q203	D-15	D225	D-14
Q204	D-15	D226	D-14
Q205	D-7	D227	B14
Q206	C-8	D251	B-15
Q207	C-8	D320	C-5
Q300	E-4	D370	C-21
Q304	G-5		



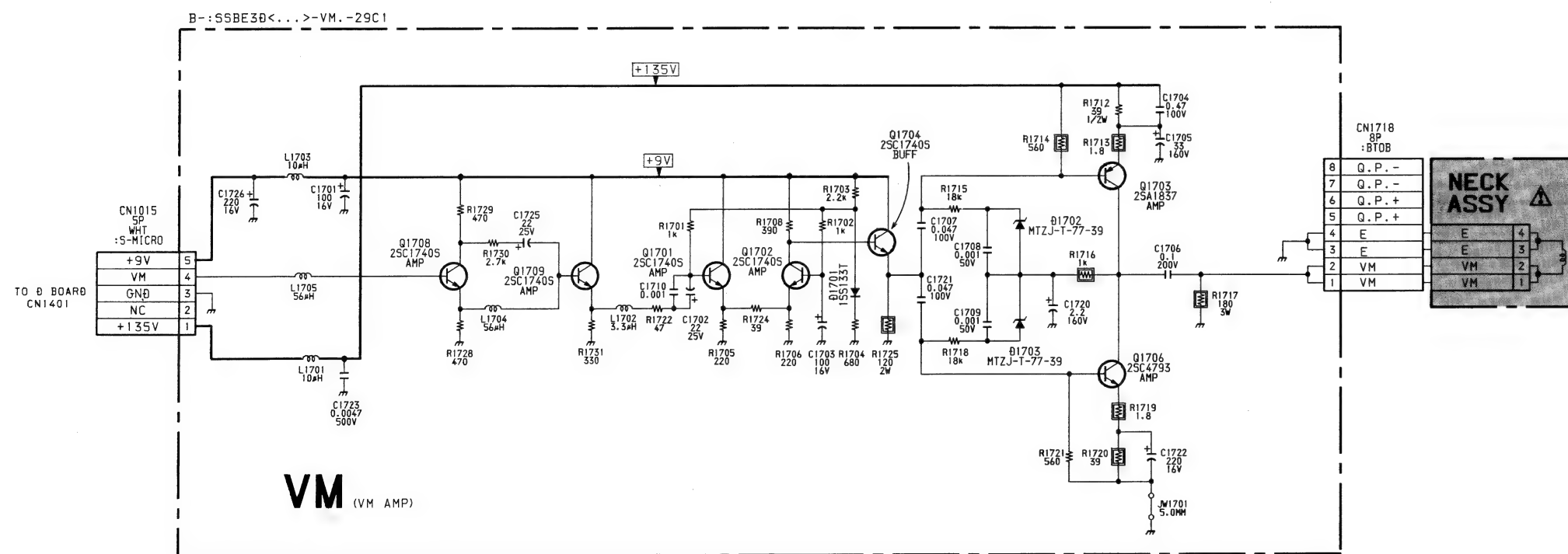
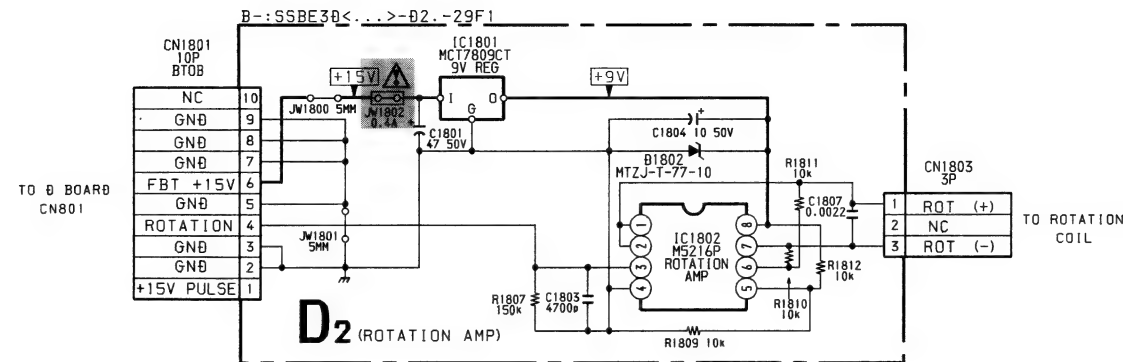
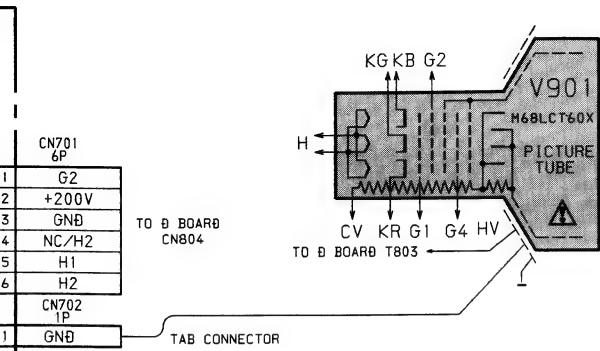
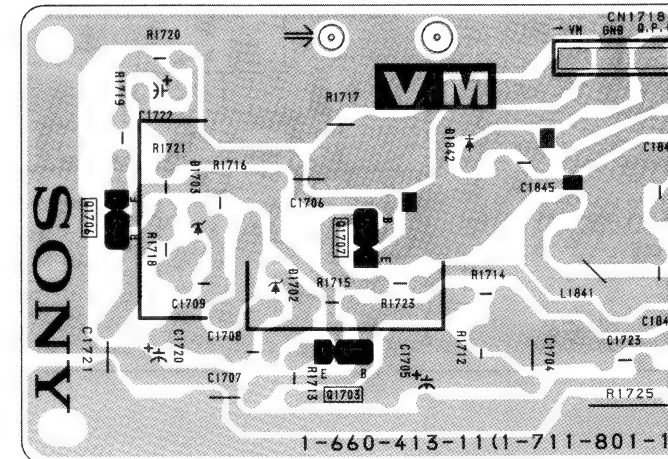
WAVEFORMS C BOARD



C Board



VM Board



C

[R, G, B OUT]

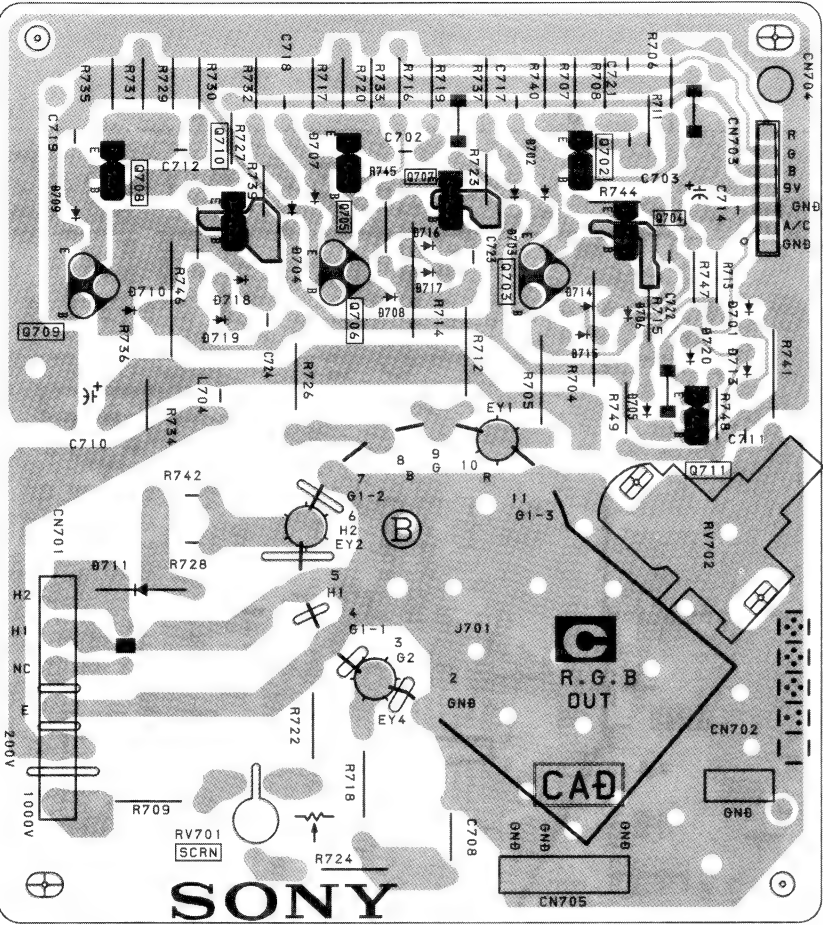
VM

[VM AMP]

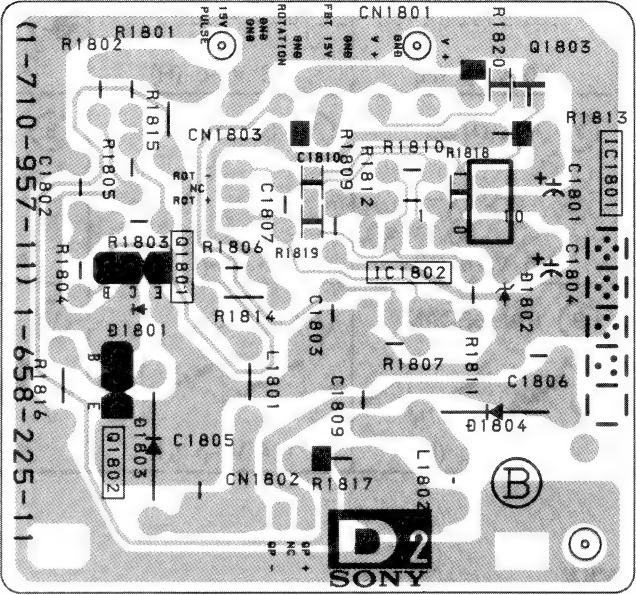
D2

[ROTATION AMP]

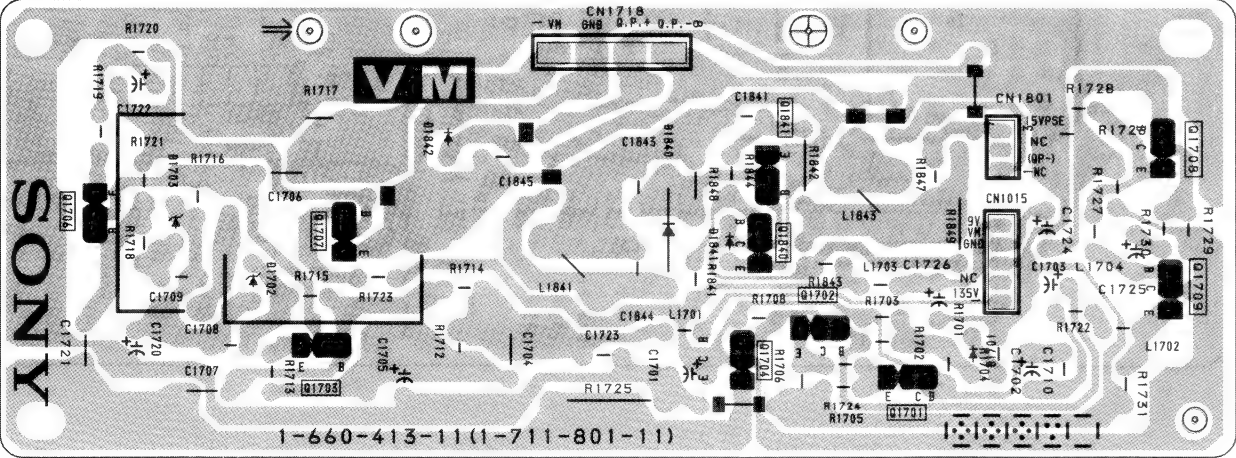
C Board



D2 Board



VM Board



C BOARD
TRANSISTOR VOLTAGE TABLE

Transistor Voltage Table				
Ref No	B Base	C Collector	E Emitter	
Q702	2.0	11.4	1.4	
Q703	12.0	168.3	11.4	
Q704	168.3	6.0	163.5	
Q705	1.7	11.4	1.2	
Q706	12.0	178.8	11.4	
Q707	178.2	6.2	173.8	
Q708	2.0	11.4	1.4	
Q709	12.0	168.3	11.4	
Q710	168.0	6.4	160.0	

VM BOARD
TRANSISTOR VOLTAGE TABLE

Transistor Voltage Table				
Ref No	B Base	C Collector	E Emitter	
Q1701	2.5	8.8	1.8	
Q1702	2.5	5.5	1.8	
Q1703	134.3	71.8	134.8	
Q1704	5.5	8.8	4.8	
Q1706	1.0	71.8	0.4	
Q1707	0.7	-	-	
Q1708	2.9	6.6	2.2	
Q1709	2.2	8.8	1.5	
Q1840	0.6	-	-	

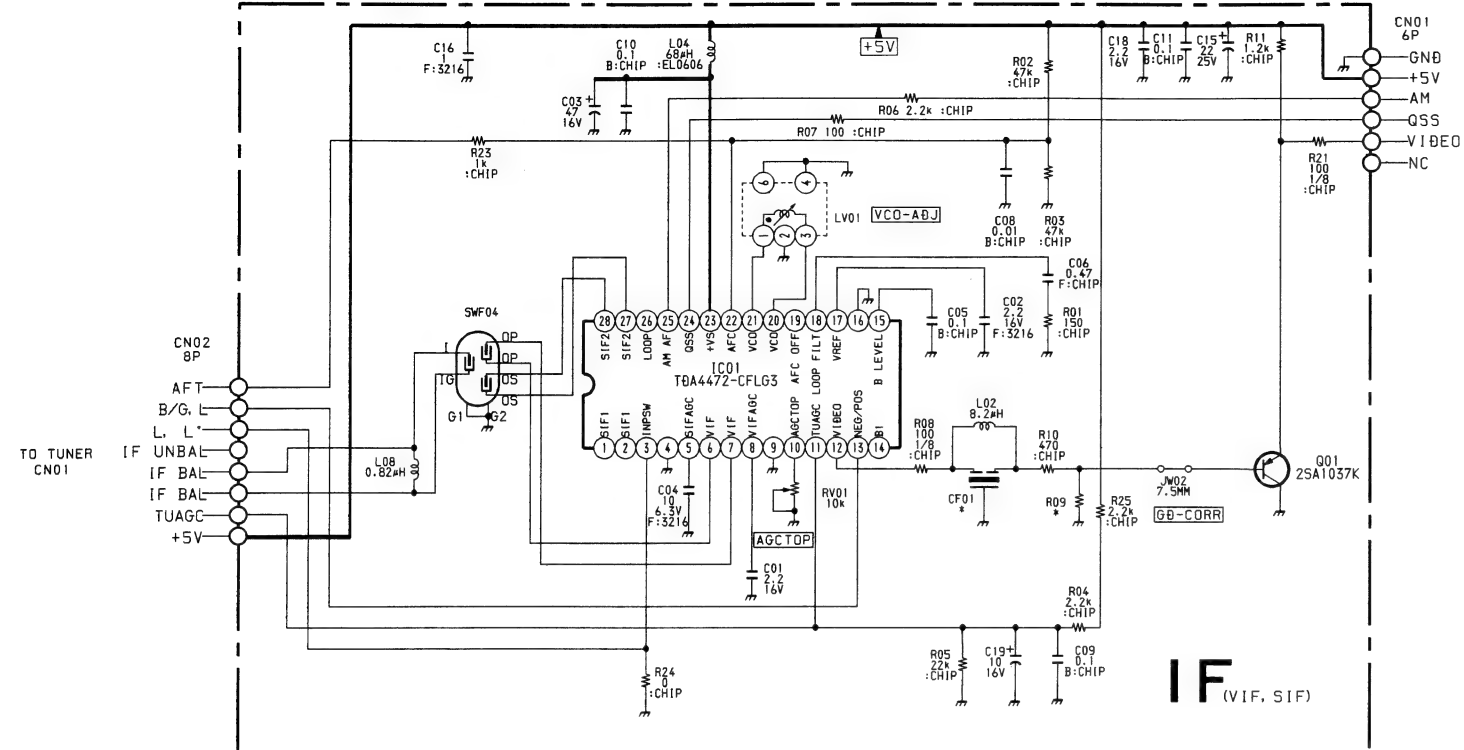
D2 BOARD IC VOLTAGE TABLE

IC Voltage Table		
Ref No	Pin No	Voltage (V)
IC1802	1-2	2.8
	3	3.0
	5-6	4.4
	7	6.2
	8	9.0

TUVIF (AEP) (KV-29X1A, 29X1D, 29X1E, 29X1K, 29X1L and 29X1R ONLY)

TUVIF (UK) (KV-29X1U ONLY)

B-#TVF-01<UK/AEP>-IF.

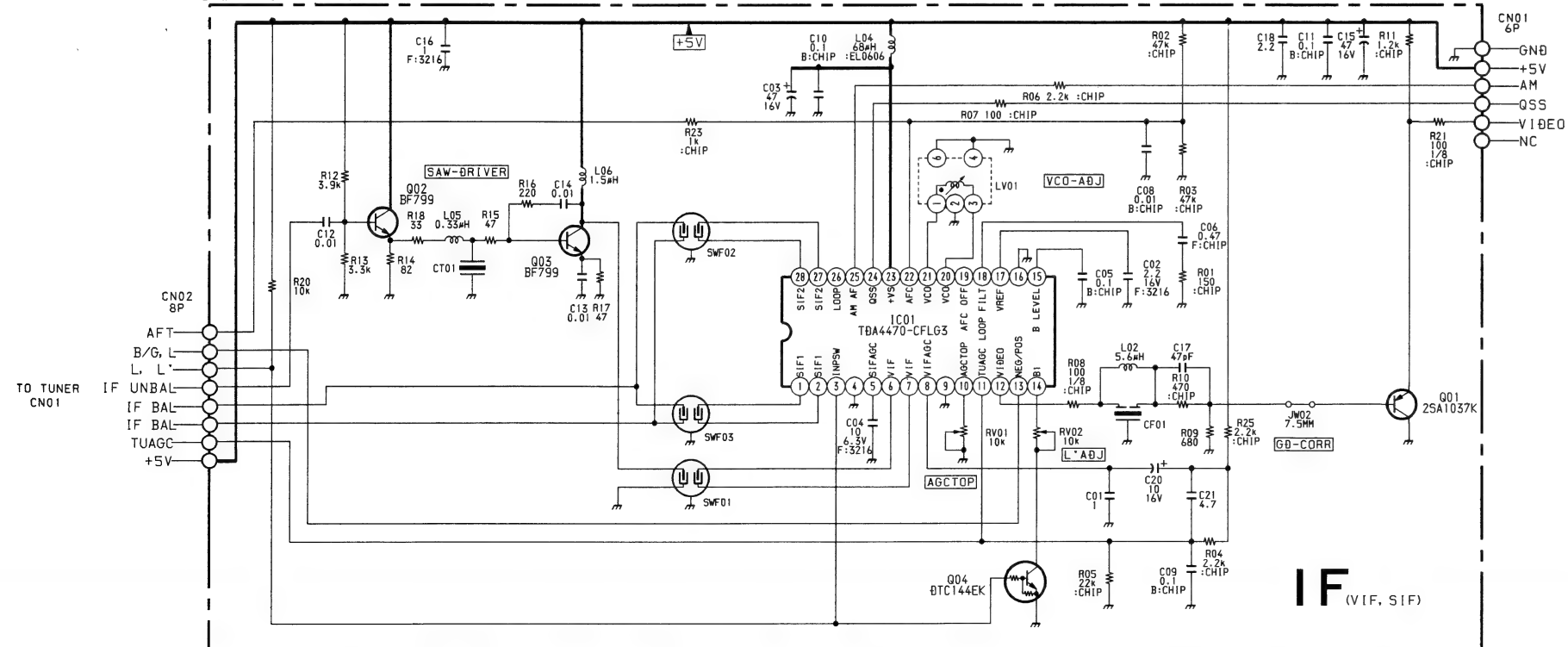


IF Board

Model Ref. No.	29X1A	29X1D	29X1E	29X1K	29X1L	29X1R	29X1U
CF01	5.5MHz	5.5MHz	5.5MHz	5.5MHz	5.5MHz	5.5MHz	6.0MHz
R09	680MF	680MF	680MF	680MF	680MF	680MF	1K

TUVIF (FR) (KV-29X1B ONLY)

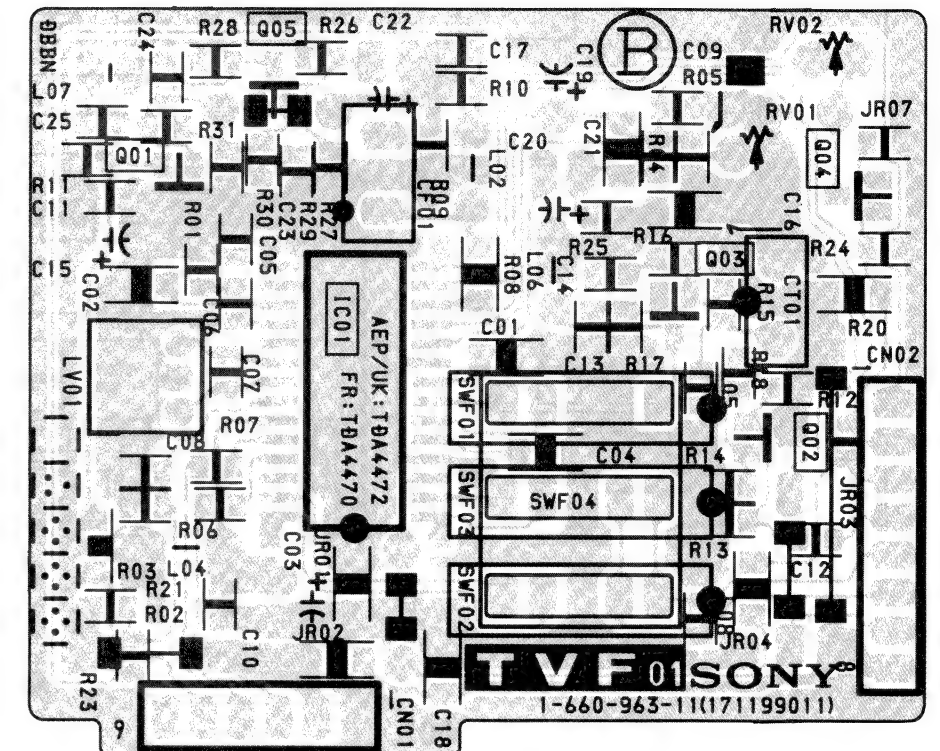
B-#TVF-01<FR>-IF.



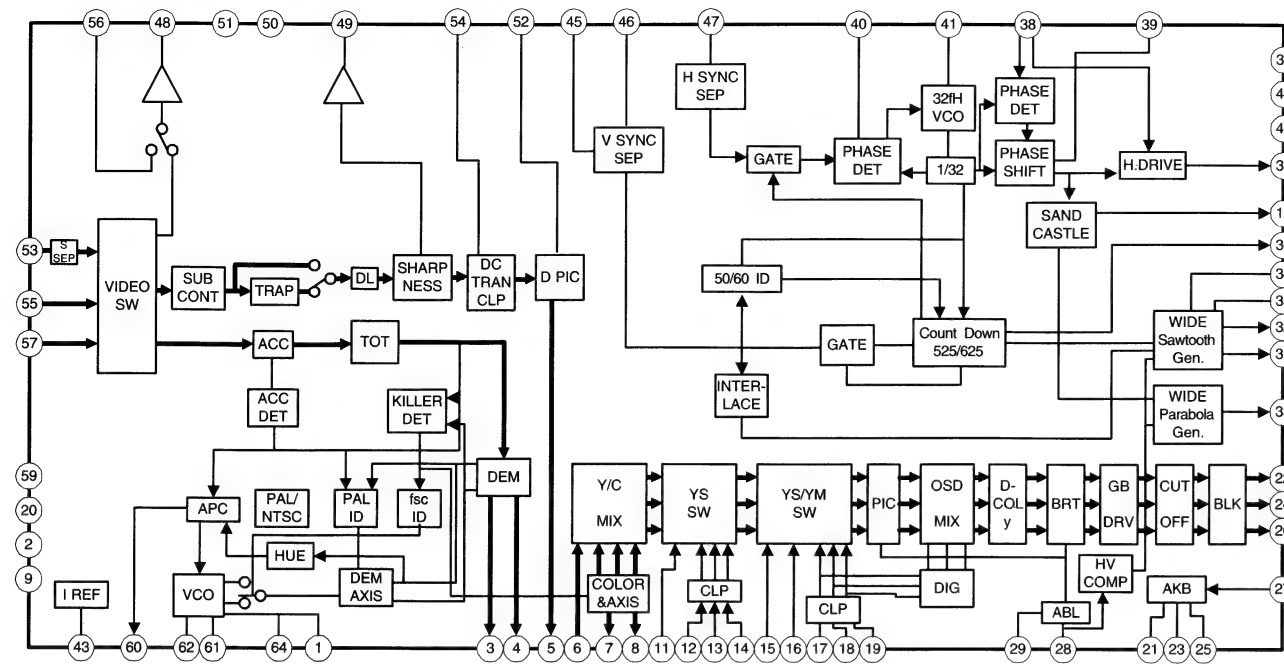
IF

[VIF, SIF]

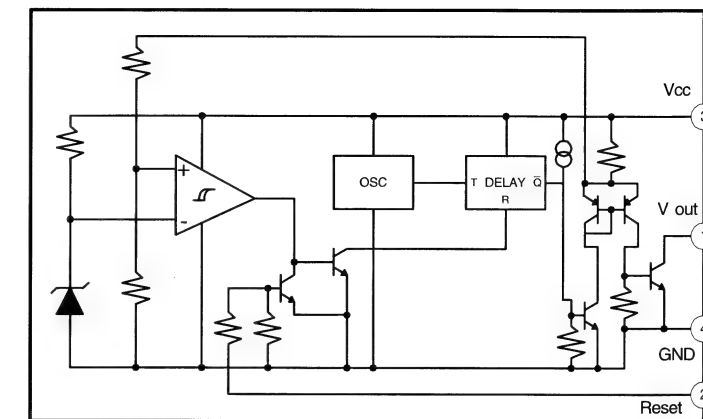
IF Board



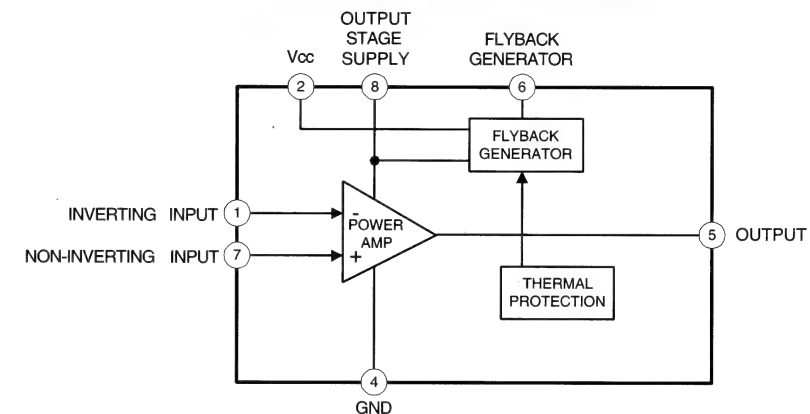
A BOARD IC301 CXA2000Q-TL



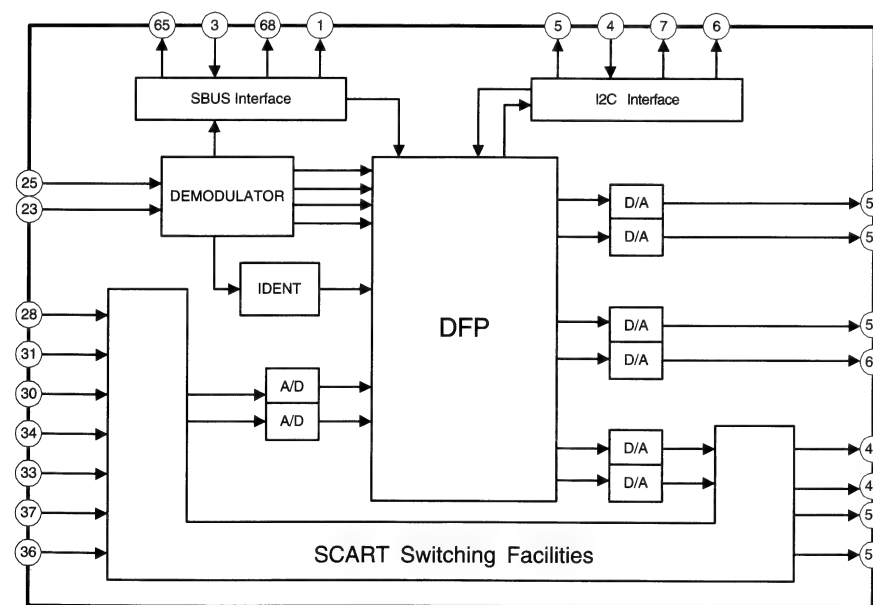
A BOARD IC4 PST593C



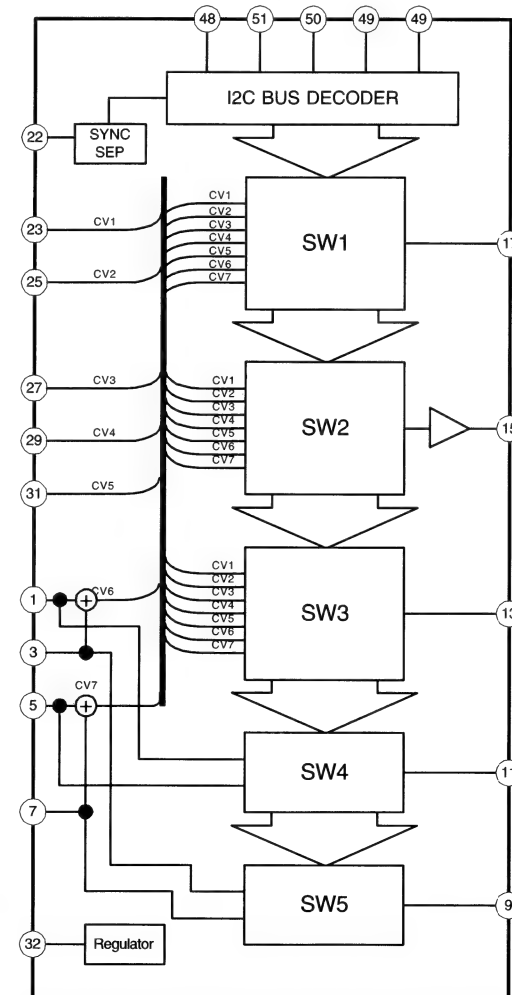
D BOARD IC500 STV9379



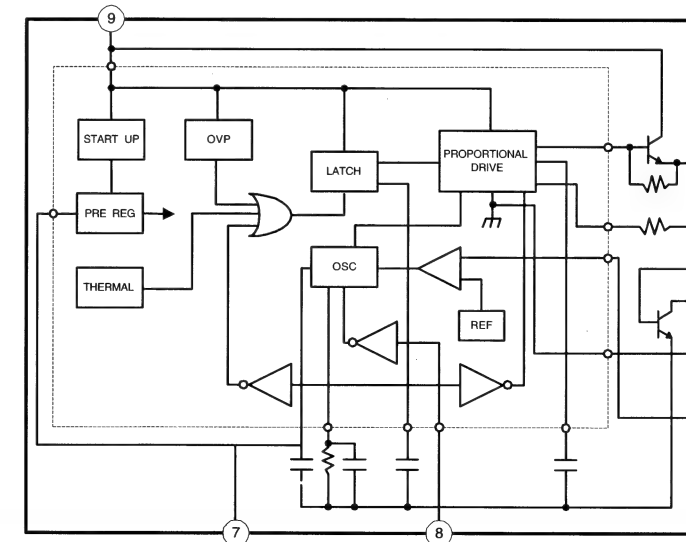
A BOARD IC202 MSP3410/MSP3400



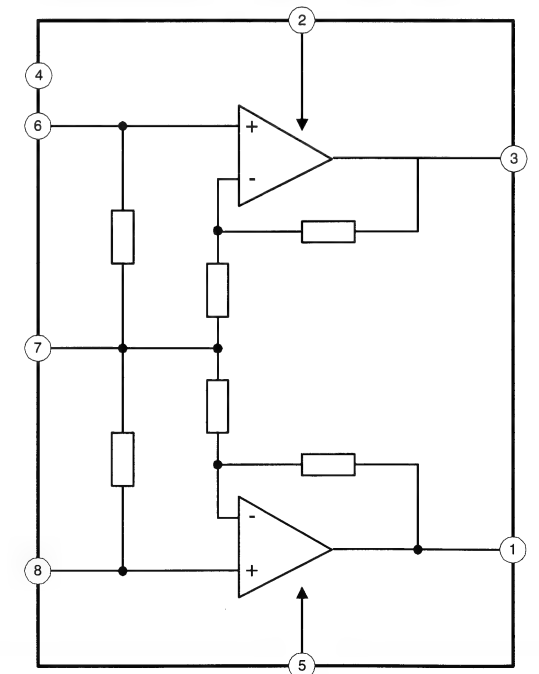
A BOARD IC201 CXA2040Q



D BOARD IC600 STR-S6708

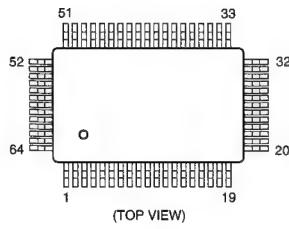


D BOARD IC1200 TDA7264

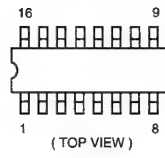


5-4. SEMICONDUCTORS

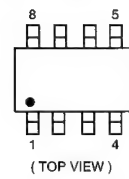
CXA2000Q-TL



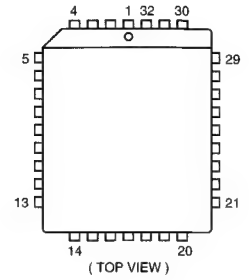
MC14052BDR2



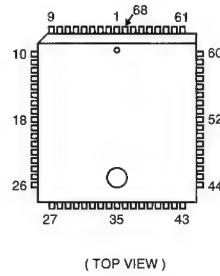
ST24E32M6TR



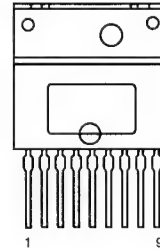
TMS27PC010A-15FML



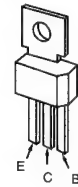
MSP3400C-PS
MSP3410-15



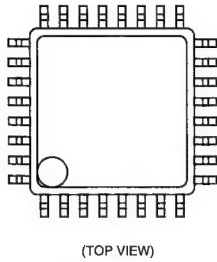
STR-S6708



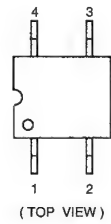
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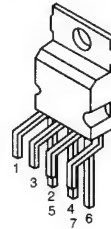
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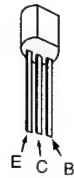
PST593C-MMP-4P



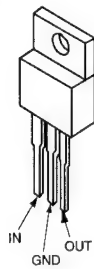
STV9379



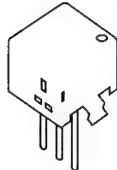
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JA101TP-Q
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2SA933AS
2SA933S
2SA1091-O
2SC3502-F
2SC2808STP-R



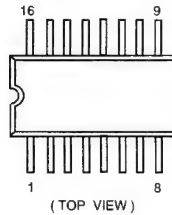
L4941BV



SBX1790-51



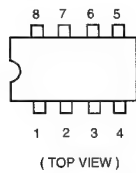
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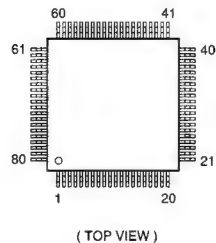
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DTC114ES
DTC143TS
DTC144ES
2SC1740S-RT



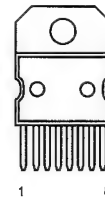
LM393P
M5216P
TDA2822M
μPC393C



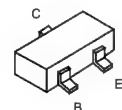
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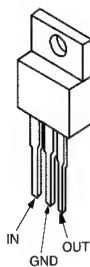
TDA7264



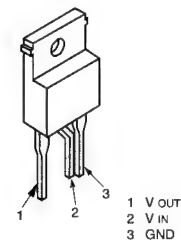
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2SA1162-G
2SC2412K



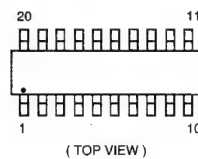
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LM2940CT
LM2940T-9.0
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μPC2405HF



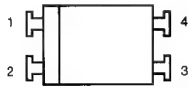
SE135N



TDA8395T



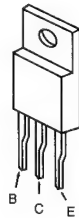
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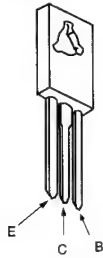
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2SA1667
2SA1837
2SC3852A



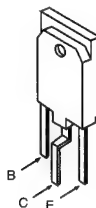
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2SC4793

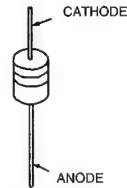
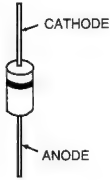


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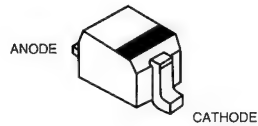


AU-01Z-V1 GP08D
EG-1Z-V1 RGP02
EGP20G RGP10GPKG23
EL1Z RGP15GPKG23
EM1-V1 RU3YX
EU-1-V1 RU4AM-T3
EU2-V1 RU4DS
FML-G12S

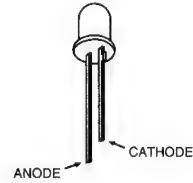
MTZJ-3.6A RD3.9ESB2
MTZJ-3.9B RD5.1ESB2
MTZJ-5.1B RD5.6ESB2
MTZJ-5.6B RD6.2ESB2
MTZJ-6.2B RD6.8ESB2
MTZJ-6.8B RD7.5ESB2
MTZJ-7.5C RD10ESB2
MTZJ-9.1 RD39ES-B2
MTZJ-T-77-9.1A
MTZJ-10 1SS133T-77
MTZJ-39



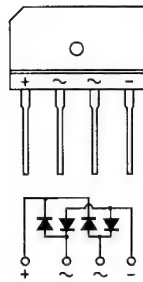
BAS216 MA8330
DTZ6.8C 1SS355
DTZ9.1 Udz-TE-17-5.6B
DTZ33B Udz-TE-17-9.1B



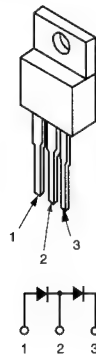
SLA-570KT3F



D4SB60L



FMS-3FU





SECTION 6

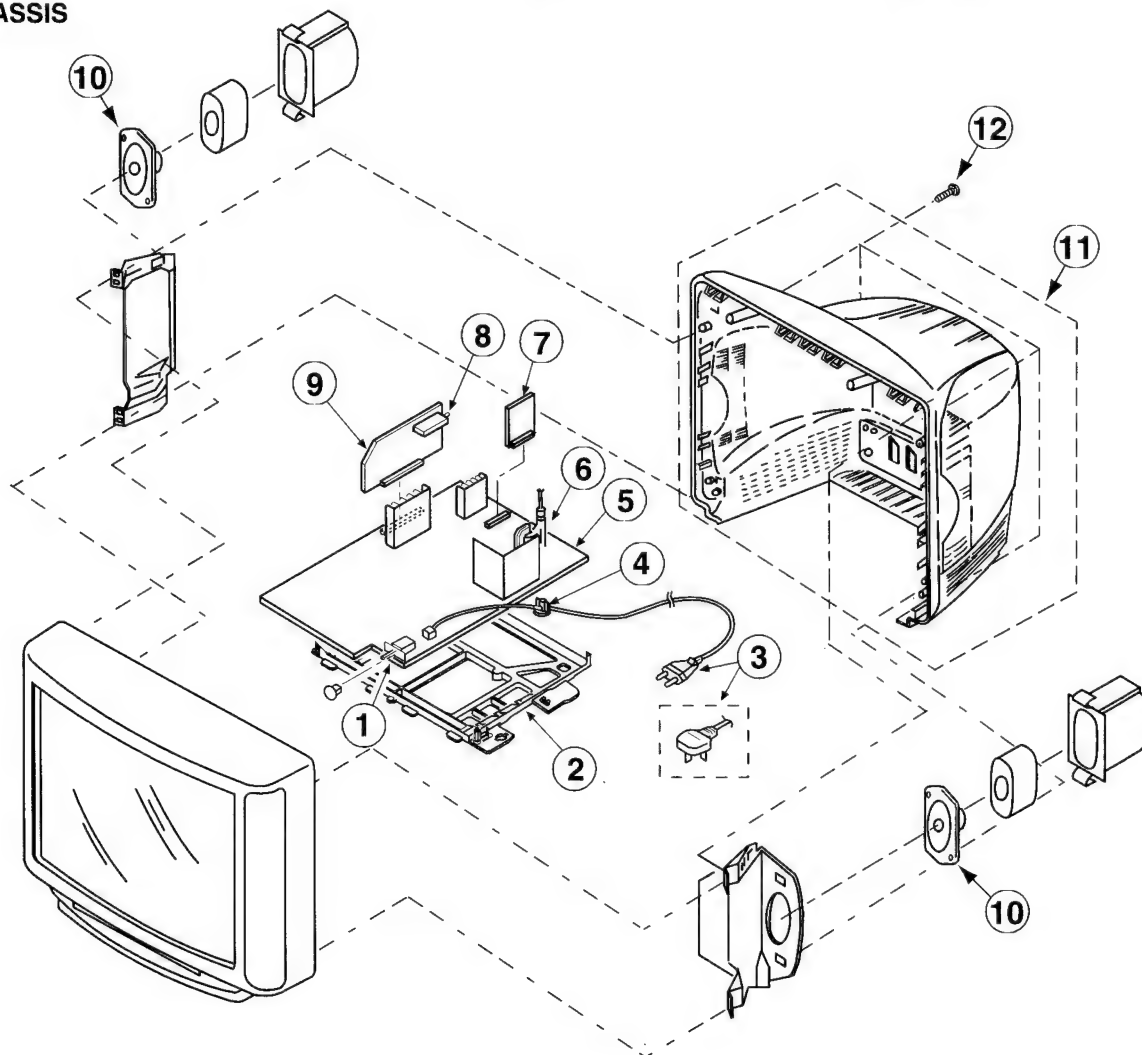
EXPLODED VIEWS







NOTE :

- Items with no part number and no description are not stocked because they are seldom required for routine service.
- The construction parts of an assembled part are indicated with a collation number in the remarks column.
- Items marked " * " are not stocked since they are seldom required for routine service. Some delay should be anticipated when ordering these items.

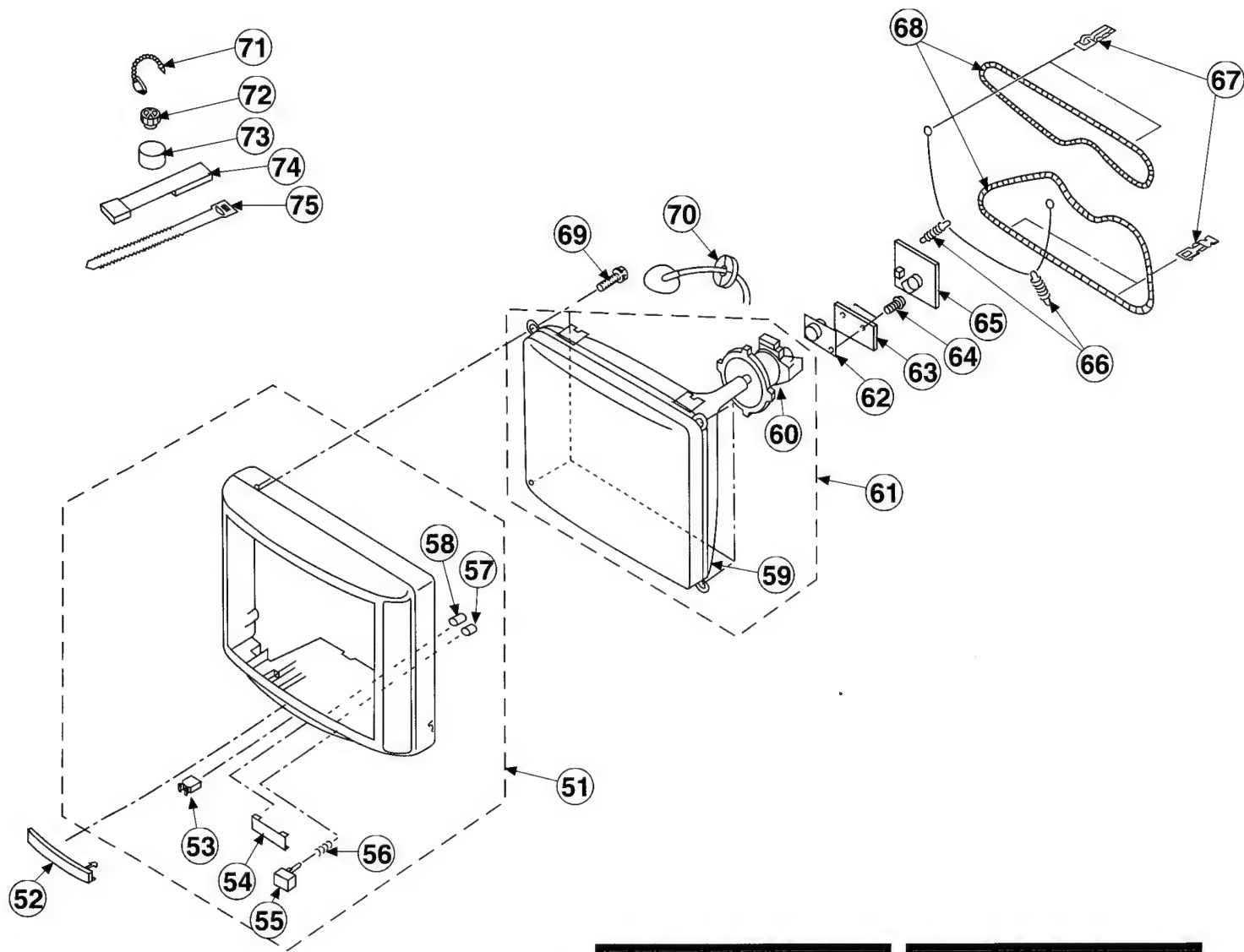
The components identified by shading and marked  are critical for safety.
Replace only with the part number specified.

Les composants identifiés par une trame et une marque  sont critiques pour la sécurité.
Ne les remplacer que par une pièce portant le numéro spécifié.

6-1. CHASSIS

REF NO	PART NO	DESCRIPTION	REMARK	REF NO	PART NO	DESCRIPTION	REMARK
1	 1-571-433-21	SWITCH, PUSH (AC POWER)		8	1-693-338-11	TUNER/VIF (AEP) (KV-29X1A/29X1D/29X1E/29X1K/29X1L/ 29X1R)	
2	*4-203-315-01	BRACKET, MAIN			1-693-340-11	TUNER/VIF (FR) (KV-29X1B)	
3	 1-751-680-11	CORD, POWER (WITH NOISE FILTER) 2.5A/250V (KV-29X1A/29X1B/29X1D/ 29X1E)			1-693-339-11	TUNER/VIF (UK) (KV-29X1U)	
	 1-690-270-21	CORD, POWER (WITH CONNECTOR) 2.5A/250V (KV-29X1K/29X1R)		9	*A-1632-423-A	A BOARD, COMPLETE (KV-29X1A)	
	 1-776-240-11	CORD, POWER (FILTER) 3A/250V (KV-29X1L/29X1U)			*A-1632-425-A	A BOARD, COMPLETE (KV-29X1B)	
4	 *4-202-531-01	AC CORD LOCK (SC)			*A-1632-422-A	A BOARD, COMPLETE (KV-29X1D)	
5	*A-1642-165-A	D BOARD, COMPLETE			*A-1632-424-A	A BOARD, COMPLETE (KV-29X1E)	
6	 1-453-169-11	TRANSFORMER ASSY, FLYBACK (U4-160442)			*A-1632-426-A	A BOARD, COMPLETE (KV-29X1K)	
7	*A-1640-214-A	D2 BOARD, COMPLETE			*A-1632-433-A	A BOARD, COMPLETE (KV-29X1L)	
					*A-1632-427-A	A BOARD, COMPLETE (KV-29X1R)	
					*A-1632-400-A	A BOARD, COMPLETE (KV-29X1U)	
				10	1-544-727-11	SPEAKER (7.5x13CM)	
				11	X-4200-257-1	COVER ASSY, REAR (SC)	
				12	4-039-358-01	SCREW (4x16), (+) BV TAPPING	

6-2. PICTURE TUBE



The components identified by shading and marked ! are critical for safety. Replace only with the part number specified.


Les composants identifiés par une trame et une marque ! sont critiques pour la sécurité. Ne les remplacer que par une pièce portant le numéro spécifique.


REF NO	PART NO	DESCRIPTION	REMARK
51	X-4200-258-1	BEZNET ASSY	53-58
52	4-203-364-01	DOOR, CONTROL	
53	4-047-464-01	CATCHER, PUSH	
54	4-203-365-01	WINDOW, ORNAMENTAL	59-60
55	4-203-362-01	BUTTON, POWER	
56	4-202-964-01	SPRING	
57	*4-203-363-01	GUIDE, LED LIGHT	59-60
58	4-202-465-01	GUIDE, LED LIGHT	
59	8-733-856-05	PICTURE TUBE (SD-269) (M68LCT60X)	
60	8-451-467-11	DEFLECTION YOKE (Y29GXA2B)	59-60
61	8-733-856-71	ITC	
62	8-453-005-11	NECK ASSY (NA297-M)	
63	*A-1644-070-A	VM BOARD, COMPLETE	59-60
64	4-639-357-01	SCREW(3x8), (+) BV TAPPING	
65	*A-1638-082-A	C BOARD, COMPLETE	
66	4-200-433-01	SPRING, EXTENSION	

REF NO	PART NO	DESCRIPTION	REMARK
67	4-202-415-01	CLIP, DGC (29")	
68	1-406-807-11	COIL, DEGAUSSING	
69	4-036-188-01	SCREW (M), PT	
70	4-202-693-01	HOLDER, HV CABLE	
71	4-308-870-00	CLIP, LEAD WIRE	
72	1-452-094-00	MAGNET, ROTATABLE DISK; 15MM Ø	
73	1-452-032-00	MAGNET, DISK; 10MM Ø	
74	X-4387-214-1	PERMALLOY ASSY, CORRECTION	
75	3-701-007-00	BAND, BINDING	

SECTION 7

ELECTRICAL PARTS LIST

The components identified by shading and marked  are critical for safety.
Replace only with the part number specified.

Les composants identifiés par une trame et une marque  sont critiques pour la sécurité.
Ne les remplacer que par une pièce portant le numéro spécifié.

- Items marked " * " are not stocked since they are seldom required for routine service. Some delay should be anticipated when ordering these items.

- All variable and adjustable resistors have characteristic curve B, unless otherwise noted.

RESISTORS

- All resistors are in ohms
- F : nonflammable

When indicating parts by reference number, please include the board name.

CAPACITORS

MF : mF, PF : mmF

COILS

MMH : mH, μ H : mH

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REF.NO.	PART NO.	DESCRIPTION	REMARK	REF.NO.	PART NO.	DESCRIPTION	REMARK
	*A-1632-423-A	A BOARD, COMPLETE (KV-29X1A) *****		C112	1-163-141-00	CERAMIC CHIP 0.001MF	5%
	*A-1632-425-A	A BOARD, COMPLETE (KV-29X1B) *****		C113	1-126-967-11	ELECT 47MF	20%
	*A-1632-422-A	A BOARD, COMPLETE (KV-29X1D) *****		C120	1-163-117-00	CERAMIC CHIP 100PF	5%
	*A-1632-424-A	A BOARD, COMPLETE (KV-29X1E) *****		C121	1-163-113-00	CERAMIC CHIP 68PF	5%
	*A-1632-426-A	A BOARD, COMPLETE (KV-29X1K) *****		C122	1-163-137-00	CERAMIC CHIP 680PF	5%
	*A-1632-433-A	A BOARD, COMPLETE (KV-29X1L) *****		C123	1-163-113-00	CERAMIC CHIP 68PF	5%
	*A-1632-427-A	A BOARD, COMPLETE (KV-29X1R) *****		C124	1-137-399-11	FILM 0.1MF	5%
	*A-1632-400-A	A BOARD, COMPLETE (KV-29X1U) *****		C201	1-163-139-00	CERAMIC CHIP 820PF	10%
	1-750-797-11	SOCKET, PLCC		C202	1-164-004-11	CERAMIC CHIP 0.1MF	10%
	< CAPACITOR >			C203	1-126-933-11	ELECT 100MF	20%
C1	1-163-038-00	CERAMIC CHIP 0.1MF	25V	C204	1-163-038-00	CERAMIC CHIP 0.1MF	25V
C2	1-126-965-11	ELECT 22MF	20% 50V	C205	1-126-965-11	ELECT 22MF	20% 50V
C3	1-163-104-00	CERAMIC CHIP 30PF	5% 50V	C206	1-163-141-00	CERAMIC CHIP 0.001MF	5%
C4	1-163-104-00	CERAMIC CHIP 30PF	5% 50V	C207	1-164-505-11	CERAMIC CHIP 2.2MF	16V
C8	1-163-038-00	CERAMIC CHIP 0.1MF	25V	C208	1-164-505-11	CERAMIC CHIP 2.2MF	16V
C10	1-163-243-11	CERAMIC CHIP 47PF	5% 50V	C209	1-164-505-11	CERAMIC CHIP 2.2MF	16V
C11	1-163-243-11	CERAMIC CHIP 47PF	5% 50V	C210	1-216-295-00	METAL GLAZE 0 5% 1/10W	
C15	1-163-133-00	CERAMIC CHIP 470PF	5% 50V	C211	1-164-505-11	CERAMIC CHIP 2.2MF	16V
C18	1-163-038-00	CERAMIC CHIP 0.1MF	25V	C212	1-164-346-11	CERAMIC CHIP 1MF	16V
C19	1-163-989-11	CERAMIC CHIP 0.033MF	10% 25V	C213	1-163-133-00	CERAMIC CHIP 470PF	5% 50V
C20	1-164-232-11	CERAMIC CHIP 0.01MF	10% 50V	C214	1-164-346-11	CERAMIC CHIP 1MF	16V
C21	1-164-232-11	CERAMIC CHIP 0.01MF	10% 50V	C215	1-163-133-00	CERAMIC CHIP 470PF	5% 50V
C22	1-163-117-00	CERAMIC CHIP 100PF	5% 50V	C216	1-126-967-11	ELECT 47MF	20% 16V
C40	1-163-989-11	CERAMIC CHIP 0.033MF	10% 25V	C217	1-164-232-11	CERAMIC CHIP 0.01MF	10% 50V
C41	1-163-989-11	CERAMIC CHIP 0.033MF	10% 25V	C218	1-126-967-11	ELECT 47MF	20% 16V
C42	1-163-989-11	CERAMIC CHIP 0.033MF	10% 25V	C219	1-164-232-11	CERAMIC CHIP 0.01MF	10% 50V
C43	1-163-121-00	CERAMIC CHIP 150PF	5% 50V	C220	1-164-505-11	CERAMIC CHIP 2.2MF	16V
C44	1-163-989-11	CERAMIC CHIP 0.033MF	10% 25V	C221	1-164-505-11	CERAMIC CHIP 2.2MF	16V
C45	1-163-038-00	CERAMIC CHIP 0.1MF	25V	C222	1-164-346-11	CERAMIC CHIP 1MF	16V
C80	1-163-117-00	CERAMIC CHIP 100PF	5% 50V	C223	1-163-133-00	CERAMIC CHIP 470PF	5% 50V
C81	1-164-005-11	CERAMIC CHIP 0.47MF	25V	C224	1-164-346-11	CERAMIC CHIP 1MF	16V
C82	1-163-037-11	CERAMIC CHIP 0.022MF	10% 50V	C225	1-163-133-00	CERAMIC CHIP 470PF	5% 50V
C90	1-163-038-00	CERAMIC CHIP 0.1MF	25V	C226	1-126-967-11	ELECT 47MF	20% 16V
C101	1-163-038-00	CERAMIC CHIP 0.1MF	25V	C227	1-164-232-11	CERAMIC CHIP 0.01MF	10% 50V
C102	1-126-934-11	ELECT 220MF	20% 16V	C228	1-126-967-11	ELECT 47MF	20% 16V
C103	1-126-965-11	ELECT 22MF	20% 50V	C229	1-164-232-11	CERAMIC CHIP 0.01MF	10% 50V
C104	1-163-117-00	CERAMIC CHIP 100PF	5% 50V	C230	1-216-295-00	METAL GLAZE 0 5% 1/10W	
C110	1-126-967-11	ELECT 47MF	20% 16V	C231	1-163-038-00	CERAMIC CHIP 0.1MF	25V
				C232	1-126-967-11	ELECT 47MF	20% 16V
				C251	1-163-087-00	CERAMIC CHIP 4PF	0.25PF 50V
				C252	1-163-087-00	CERAMIC CHIP 4PF	0.25PF 50V
				C253	1-163-117-00	CERAMIC CHIP 100PF	5% 50V
				C254	1-163-109-00	CERAMIC CHIP 47PF	5% 50V
				C255	1-163-117-00	CERAMIC CHIP 100PF	5% 50V
				C256	1-163-038-00	CERAMIC CHIP 0.1MF	25V

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REF.NO.	PART NO.	DESCRIPTION	REMARK	REF.NO.	PART NO.	DESCRIPTION	REMARK
C257	1-126-965-11	ELECT 22MF	20% 50V	C337	1-163-009-11	CERAMIC CHIP 0.001MF	10% 50V
C258	1-126-964-11	ELECT 10MF	20% 50V	C338	1-164-346-11	CERAMIC CHIP 1MF	16V
C259	1-164-336-11	CERAMIC CHIP 0.33MF	25V	C339	1-164-232-11	CERAMIC CHIP 0.01MF	10% 50V
C260	1-163-038-00	CERAMIC CHIP 0.1MF	25V	C340	1-126-933-11	ELECT 100MF	20% 16V
C261	1-163-133-00	CERAMIC CHIP 470PF	5% 50V	C341	1-164-005-11	CERAMIC CHIP 0.47MF	25V
C262	1-163-133-00	CERAMIC CHIP 470PF	5% 50V	C342	1-164-346-11	CERAMIC CHIP 1MF	16V
C263	1-163-038-00	CERAMIC CHIP 0.1MF	25V	C343	1-163-017-00	CERAMIC CHIP 0.0047MF	10% 50V
C264	1-126-962-11	ELECT 3.3MF	20% 50V	C344	1-163-117-00	CERAMIC CHIP 100PF	5% 50V
C265	1-126-964-11	ELECT 10MF	20% 50V	C347	1-164-005-11	CERAMIC CHIP 0.47MF	25V
C266	1-126-964-11	ELECT 10MF	20% 50V	C348	1-163-038-00	CERAMIC CHIP 0.1MF	25V
C267	1-126-965-11	ELECT 22MF	20% 50V	C350	1-126-964-11	ELECT 10MF	20% 50V
C268	1-163-038-00	CERAMIC CHIP 0.1MF	25V	C351	1-164-505-11	CERAMIC CHIP 2.2MF	16V
C269	1-163-131-00	CERAMIC CHIP 390PF	5% 50V	C352	1-164-005-11	CERAMIC CHIP 0.47MF	25V
C270	1-163-131-00	CERAMIC CHIP 390PF	5% 50V	C353	1-164-505-11	CERAMIC CHIP 2.2MF	16V
C271	1-163-141-00	CERAMIC CHIP 0.001MF	5% 50V	C354	1-164-005-11	CERAMIC CHIP 0.47MF	25V
C272	1-163-141-00	CERAMIC CHIP 0.001MF	5% 50V	C355	1-126-965-11	ELECT 22MF	20% 50V
C273	1-163-141-00	CERAMIC CHIP 0.001MF	5% 50V	C356	1-164-232-11	CERAMIC CHIP 0.01MF	10% 50V
C274	1-163-141-00	CERAMIC CHIP 0.001MF	5% 50V	C357	1-163-133-00	CERAMIC CHIP 470PF	5% 50V
C275	1-164-346-11	CERAMIC CHIP 1MF	16V	C358	1-164-005-11	CERAMIC CHIP 0.47MF	25V
C276	1-164-346-11	CERAMIC CHIP 1MF	16V	C359	1-163-231-11	CERAMIC CHIP 15PF	5% 50V
C277	1-164-346-11	CERAMIC CHIP 1MF	16V	C360	1-163-231-11	CERAMIC CHIP 15PF	5% 50V
C278	1-164-346-11	CERAMIC CHIP 1MF	16V	C370	1-164-505-11	CERAMIC CHIP 2.2MF	16V
C279	1-126-965-11	ELECT 22MF	20% 50V	(KV-29X1B/29X1D/29X1E/29X1K/29X1R)			
C280	1-163-038-00	CERAMIC CHIP 0.1MF	25V	C371	1-163-141-00	CERAMIC CHIP 0.001MF	5% 50V
C281	1-126-965-11	ELECT 22MF	20% 50V	C372	1-164-004-11	CERAMIC CHIP 0.1MF	10% 25V
C282	1-163-038-00	CERAMIC CHIP 0.1MF	25V	(KV-29X1B/29X1D/29X1E/29X1K/29X1R)			
C300	1-163-109-00	CERAMIC CHIP 47PF	5% 50V	C373	1-164-489-11	CERAMIC CHIP 0.22MF	10% 16V
C301	1-163-038-00	CERAMIC CHIP 0.1MF	25V	(KV-29X1B/29X1D/29X1E/29X1K/29X1R)			
C302	1-163-141-00	CERAMIC CHIP 0.001MF	5% 50V	< FILTER >			
C303	1-163-141-00	CERAMIC CHIP 0.001MF	5% 50V	CF120	1-409-327-00	TRAP, CERAMIC (6.5MHz) (KV-29X1B)	
C304	1-163-038-00	CERAMIC CHIP 0.1MF	25V	< CONNECTOR >			
C305	1-163-038-00	CERAMIC CHIP 0.1MF	25V	CN1	1-695-302-11	CONNECTOR, BOARD TO BOARD 50P	
C306	1-164-232-11	CERAMIC CHIP 0.01MF	10% 50V	CN2	*1-568-880-51	PIN, CONNECTOR 5P	
C307	1-164-232-11	CERAMIC CHIP 0.01MF	10% 50V	CN201	1-766-296-11	CONNECTOR, DUAL SCART	
C308	1-164-232-11	CERAMIC CHIP 0.01MF	10% 50V	CN301	*1-568-882-51	PIN, CONNECTOR 7P	
C309	1-164-346-11	CERAMIC CHIP 1MF	16V	< DIODE >			
C310	1-164-346-11	CERAMIC CHIP 1MF	16V	D2	8-719-988-62	DIODE 1SS355	
C311	1-164-346-11	CERAMIC CHIP 1MF	16V	D10	8-719-158-15	DIODE RD5.6S-B	
C312	1-164-505-11	CERAMIC CHIP 2.2MF	16V	D11	8-719-158-15	DIODE RD5.6S-B	
C313	1-163-141-00	CERAMIC CHIP 0.001MF	5% 50V	D12	8-719-158-15	DIODE RD5.6S-B	
C315	1-216-295-00	METAL GLAZE 0	5% 1/10W	D101	8-719-977-81	DIODE DTZ33B	
C317	1-163-038-00	CERAMIC CHIP 0.1MF	25V	D201	8-719-977-22	DIODE DTZ9.1	
C319	1-163-017-00	CERAMIC CHIP 0.0047MF	10% 50V	D202	8-719-977-22	DIODE DTZ9.1	
C320	1-126-965-11	ELECT 22MF	20% 50V	D203	8-719-977-22	DIODE DTZ9.1	
C321	1-164-232-11	CERAMIC CHIP 0.01MF	10% 50V	D204	8-719-977-22	DIODE DTZ9.1	
C322	1-164-004-11	CERAMIC CHIP 0.1MF	10% 25V	D205	8-719-977-22	DIODE DTZ9.1	
C323	1-164-004-11	CERAMIC CHIP 0.1MF	10% 25V	D206	8-719-977-22	DIODE DTZ9.1	
C324	1-164-004-11	CERAMIC CHIP 0.1MF	10% 25V	D207	8-719-977-22	DIODE DTZ9.1	
C325	1-164-346-11	CERAMIC CHIP 1MF	16V	D208	8-719-977-22	DIODE DTZ9.1	
C326	1-163-141-00	CERAMIC CHIP 0.001MF	5% 50V	D209	8-719-977-22	DIODE DTZ9.1	
C327	1-137-374-11	FILM 0.047MF	5% 50V	D210	8-719-977-22	DIODE DTZ9.1	
C328	1-126-964-11	ELECT 10MF	20% 50V	D211	8-719-977-22	DIODE DTZ9.1	
C329	1-164-232-11	CERAMIC CHIP 0.01MF	10% 50V	D212	8-719-977-22	DIODE DTZ9.1	
C330	1-130-777-00	FILM 0.1MF	5% 63V	D213	8-719-977-22	DIODE DTZ9.1	
C331	1-137-581-11	FILM 0.1MF	5% 100V	D214	8-719-977-22	DIODE DTZ9.1	
C332	1-164-232-11	CERAMIC CHIP 0.01MF	10% 50V	D215	8-719-977-22	DIODE DTZ9.1	
C333	1-126-933-11	ELECT 100MF	20% 16V	D216	8-719-158-15	DIODE RD5.6S-B	
C334	1-164-232-11	CERAMIC CHIP 0.01MF	10% 50V				
C335	1-164-004-11	CERAMIC CHIP 0.1MF	10% 25V				
C336	1-163-009-11	CERAMIC CHIP 0.001MF	10% 50V				

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REF.NO.	PART NO.	DESCRIPTION	REMARK	REF.NO.	PART NO.	DESCRIPTION	REMARK
D217	8-719-158-15	DIODE RD5.6S-B		Q80	8-729-920-74	TRANSISTOR 2SC2412K-QR	
D218	8-719-158-15	DIODE RD5.6S-B		Q81	8-729-216-22	TRANSISTOR 2SA1162-G	
D220	8-719-988-62	DIODE 1SS355		Q110	8-729-920-74	TRANSISTOR 2SC2412K-QR	
D221	8-719-988-62	DIODE 1SS355		Q111	8-729-216-22	TRANSISTOR 2SA1162-G	
				Q112	8-729-920-74	TRANSISTOR 2SC2412K-QR	
D222	8-719-977-22	DIODE DTZ9.1		Q113	8-729-216-22	TRANSISTOR 2SA1162-G	
D223	8-719-977-22	DIODE DTZ9.1		Q114	8-729-216-22	TRANSISTOR 2SA1162-G	
D224	8-719-977-22	DIODE DTZ9.1		Q120	8-729-920-74	TRANSISTOR 2SC2412K-QR	
D225	8-719-977-22	DIODE DTZ9.1		Q121	8-729-920-74	TRANSISTOR 2SC2412K-QR (KV-29X1B)	
D226	8-719-977-22	DIODE DTZ9.1		Q122	8-729-920-74	TRANSISTOR 2SC2412K-QR	
D227	8-719-977-13	DIODE DTZ6.8C		Q124	8-729-920-74	TRANSISTOR 2SC2412K-QR (KV-29X1B)	
D251	8-719-047-16	DIODE BAS216		Q130	8-729-216-22	TRANSISTOR 2SA1162-G (KV-29X1B)	
D320	8-719-977-22	DIODE DTZ9.1		Q201	8-729-920-74	TRANSISTOR 2SC2412K-QR	
D370	8-719-047-16	DIODE BAS216		Q202	8-729-920-74	TRANSISTOR 2SC2412K-QR	
		(KV-29X1B/29X1D/29X1E/29X1K/29X1R)		Q203	8-729-920-74	TRANSISTOR 2SC2412K-QR	
< ENCAPSULATED FILTER >				Q204	8-729-920-74	TRANSISTOR 2SC2412K-QR	
FL101	1-236-071-11	ENCAPSULATED COMPONENT		Q205	8-729-901-01	TRANSISTOR DTC144EK	
FL201	1-236-071-11	ENCAPSULATED COMPONENT		Q206	8-729-216-22	TRANSISTOR 2SA1162-G	
FL202	1-236-071-11	ENCAPSULATED COMPONENT		Q207	8-729-216-22	TRANSISTOR 2SA1162-G	
FL203	1-236-071-11	ENCAPSULATED COMPONENT		Q300	8-729-901-01	TRANSISTOR DTC144EK	
< IC >				Q304	8-729-920-74	TRANSISTOR 2SC2412K-QR	
IC1	8-759-376-75	IC SDA5250M-GEG		Q305	8-729-920-74	TRANSISTOR 2SC2412K-QR	
IC2	8-759-334-20	IC ST24E32M6TR		Q306	8-729-920-74	TRANSISTOR 2SC2412K-QR	
IC3	8-759-428-13	IC TMS27PC010A-15FMBE101		Q330	8-729-216-22	TRANSISTOR 2SA1162-G	
		(KV-29X1A/29X1B/29X1D/29X1K)		Q331	8-729-920-74	TRANSISTOR 2SC2412K-QR	
	8-759-428-12	IC TMS27PC010A-15FMBW101		Q332	8-729-920-74	TRANSISTOR 2SC2412K-QR	
		(KV-29X1E/29X1L/29X1U)		Q1002	8-729-216-22	TRANSISTOR 2SA1162-G	
	8-759-167-62	IC TMS27PC010A-15FML (KV-29X1R)		< RESISTOR >			
IC4	8-759-394-57	IC PST593C-MMP-4P		JR2	1-216-296-00	METAL GLAZE 0 5% 1/8W	
IC201	8-752-076-06	IC CXA2040Q-T4		JR101	1-216-295-00	METAL GLAZE 0 5% 1/10W	
IC202	8-759-376-56	IC MSP3400C-PS		JR201	1-216-295-00	METAL GLAZE 0 5% 1/10W	
		(KV-29X1A/29X1D/29X1K/29X1R)		JR206	1-216-295-00	METAL GLAZE 0 5% 1/10W	
	8-759-376-80	IC MSP3410-15		JR207	1-216-295-00	METAL GLAZE 0 5% 1/10W	
		(KV-29X1B/29X1E/29X1L/29X1U)		JR304	1-216-296-00	METAL GLAZE 0 5% 1/8W	
IC203	8-759-385-76	IC MC14052BDR2		JR305	1-216-296-00	METAL GLAZE 0 5% 1/8W	
IC301	8-752-076-09	IC CXA2000Q-TL		R1	1-216-295-00	METAL GLAZE 0 5% 1/10W	
IC302	8-759-288-85	IC TDA4665T-T		R2	1-216-025-00	METAL GLAZE 100 5% 1/10W	
IC303	8-759-251-56	IC TDA8395T		R3	1-216-025-00	METAL GLAZE 100 5% 1/10W	
		(KV-29X1B/29X1D/29X1E/29X1K/29X1R)		R4	1-216-013-00	METAL GLAZE 33 5% 1/10W	
< COIL >				R5	1-216-065-00	METAL GLAZE 4.7K 5% 1/10W	
L10	1-410-379-31	INDUCTOR CHIP 6.8UH		R7	1-216-041-00	METAL GLAZE 470 5% 1/10W	
L102	1-408-406-00	INDUCTOR 5.6UH (KV-29X1B)		R8	1-216-065-00	METAL GLAZE 4.7K 5% 1/10W	
L111	1-410-993-11	INDUCTOR CHIP 1UH		R9	1-216-041-00	METAL GLAZE 470 5% 1/10W	
L120	1-408-408-00	INDUCTOR 8.2UH		R10	1-216-041-00	METAL GLAZE 470 5% 1/10W	
L121	1-408-397-00	INDUCTOR 1UH		R11	1-216-041-00	METAL GLAZE 470 5% 1/10W	
L122	1-408-408-00	INDUCTOR 8.2UH		R12	1-216-041-00	METAL GLAZE 470 5% 1/10W	
L300	1-408-607-31	INDUCTOR 22UH		R13	1-216-029-00	METAL GLAZE 150 5% 1/10W	
< TRANSISTOR >						(KV-29X1A/29X1D/29X1E/29X1K/29X1L/29X1R/29X1U)	
Q1	8-729-920-74	TRANSISTOR 2SC2412K-QR		R14	1-216-029-00	METAL GLAZE 150 5% 1/10W	
Q4	8-729-920-74	TRANSISTOR 2SC2412K-QR				(KV-29X1A/29X1D/29X1E/29X1K/29X1L/29X1R/29X1U)	
Q5	8-729-920-74	TRANSISTOR 2SC2412K-QR		R15	1-216-029-00	METAL GLAZE 150 5% 1/10W	
Q10	8-729-216-22	TRANSISTOR 2SA1162-G				(KV-29X1A/29X1D/29X1E/29X1K/29X1L/29X1R/29X1U)	
Q11	8-729-216-22	TRANSISTOR 2SA1162-G		R16	1-216-025-91	METAL GLAZE 100 5% 1/10W	
Q12	8-729-216-22	TRANSISTOR 2SA1162-G				(KV-29X1A/29X1D/29X1E/29X1K/29X1L/29X1R/29X1U)	
Q15	8-729-901-01	TRANSISTOR DTC144EK					
Q16	8-729-901-01	TRANSISTOR DTC144EK					
Q17	8-729-901-01	TRANSISTOR DTC144EK					
Q18	8-729-901-01	TRANSISTOR DTC144EK					



REF.NO.	PART NO.	DESCRIPTION	REMARK	REF.NO.	PART NO.	DESCRIPTION	REMARK
R17	1-216-025-91	METAL GLAZE 100 5% 1/10W (KV-29X1A/29X1D/29X1E/29X1K/29X1L/ 29X1R/29X1U)		R86	1-216-077-00	METAL GLAZE 15K 5% 1/10W	
				R87	1-216-081-00	METAL GLAZE 22K 5% 1/10W	
				R88	1-216-025-00	METAL GLAZE 100 5% 1/10W	
R18	1-216-025-00	METAL GLAZE 100 5% 1/10W		R91	1-216-025-00	METAL GLAZE 100 5% 1/10W	
R19	1-216-025-00	METAL GLAZE 100 5% 1/10W		R92	1-216-025-00	METAL GLAZE 100 5% 1/10W	
R20	1-216-025-00	METAL GLAZE 100 5% 1/10W		R93	1-216-033-00	METAL GLAZE 220 5% 1/10W	
R21	1-216-025-00	METAL GLAZE 100 5% 1/10W		R94	1-216-033-00	METAL GLAZE 220 5% 1/10W	
R24	1-216-065-00	METAL GLAZE 4.7K 5% 1/10W		R95	1-216-033-00	METAL GLAZE 220 5% 1/10W	
R25	1-216-065-00	METAL GLAZE 4.7K 5% 1/10W		R97	1-216-295-00	METAL GLAZE 0 5% 1/10W	
R28	1-216-065-00	METAL GLAZE 4.7K 5% 1/10W		R98	1-216-295-00	METAL GLAZE 0 5% 1/10W	
R29	1-216-065-00	METAL GLAZE 4.7K 5% 1/10W		R101	1-216-061-00	METAL GLAZE 3.3K 5% 1/10W	
R30	1-216-065-00	METAL GLAZE 4.7K 5% 1/10W		R102	1-216-025-00	METAL GLAZE 100 5% 1/10W	
R31	1-216-065-00	METAL GLAZE 4.7K 5% 1/10W		R103	1-216-025-00	METAL GLAZE 100 5% 1/10W	
R32	1-216-025-00	METAL GLAZE 100 5% 1/10W		R104	1-216-073-00	METAL GLAZE 10K 5% 1/10W	
R33	1-216-025-00	METAL GLAZE 100 5% 1/10W		R105	1-216-113-00	METAL GLAZE 470K 5% 1/10W	
R34	1-216-025-00	METAL GLAZE 100 5% 1/10W		R106	1-216-073-00	METAL GLAZE 10K 5% 1/10W	
R35	1-216-025-00	METAL GLAZE 100 5% 1/10W		R110	1-216-073-00	METAL GLAZE 10K 5% 1/10W	
R36	1-216-065-00	METAL GLAZE 4.7K 5% 1/10W		R111	1-216-029-00	METAL GLAZE 150 5% 1/10W	
R37	1-216-065-00	METAL GLAZE 4.7K 5% 1/10W		R112	1-216-029-00	METAL GLAZE 150 5% 1/10W	
R38	1-216-065-00	METAL GLAZE 4.7K 5% 1/10W		R113	1-216-001-00	METAL GLAZE 10 5% 1/10W	
R39	1-216-073-00	METAL GLAZE 10K 5% 1/10W		R114	1-216-029-00	METAL GLAZE 150 5% 1/10W	
R40	1-216-067-00	METAL GLAZE 5.6K 5% 1/10W		R115	1-216-037-00	METAL GLAZE 330 5% 1/10W	
R42	1-216-069-00	METAL GLAZE 6.8K 5% 1/10W		R116	1-216-065-00	METAL GLAZE 4.7K 5% 1/10W	
R44	1-216-069-00	METAL GLAZE 6.8K 5% 1/10W		R117	1-216-055-00	METAL GLAZE 1.8K 5% 1/10W (KV-29X1A/29X1B/29X1D/29X1E/29X1K/ 29X1L/29X1R)	
R46	1-216-095-00	METAL GLAZE 82K 5% 1/10W			1-216-056-00	METAL GLAZE 2K 5% 1/10W (KV-29X1U)	
R47	1-216-057-00	METAL GLAZE 2.2K 5% 1/10W					
R48	1-216-121-91	METAL GLAZE 1M 5% 1/10W					
R49	1-216-025-00	METAL GLAZE 100 5% 1/10W					
R50	1-216-065-00	METAL GLAZE 4.7K 5% 1/10W		R118	1-216-071-00	METAL GLAZE 8.2K 5% 1/10W	
R51	1-216-065-00	METAL GLAZE 4.7K 5% 1/10W		R119	1-216-033-00	METAL GLAZE 220 5% 1/10W	
R52	1-216-065-00	METAL GLAZE 4.7K 5% 1/10W		R120	1-216-069-00	METAL GLAZE 6.8K 5% 1/10W	
R53	1-216-065-00	METAL GLAZE 4.7K 5% 1/10W		R121	1-216-073-00	METAL GLAZE 10K 5% 1/10W	
R54	1-216-025-00	METAL GLAZE 100 5% 1/10W		R122	1-216-041-00	METAL GLAZE 470 5% 1/10W	
R58	1-216-063-91	METAL GLAZE 3.9K 5% 1/10W		R123	1-216-031-00	METAL GLAZE 180 5% 1/10W	
R59	1-216-025-00	METAL GLAZE 100 5% 1/10W		R124	1-216-049-00	METAL GLAZE 1K 5% 1/10W	
R60	1-216-025-00	METAL GLAZE 100 5% 1/10W		R125	1-216-081-00	METAL GLAZE 22K 5% 1/10W	
R61	1-216-025-00	METAL GLAZE 100 5% 1/10W		R126	1-216-025-00	METAL GLAZE 100 5% 1/10W	
R62	1-216-025-00	METAL GLAZE 100 5% 1/10W		R127	1-216-081-00	METAL GLAZE 22K 5% 1/10W	
R63	1-216-025-00	METAL GLAZE 100 5% 1/10W		R128	1-216-035-00	METAL GLAZE 270 5% 1/10W	
R64	1-216-025-00	METAL GLAZE 100 5% 1/10W		R129	1-216-037-00	METAL GLAZE 330 5% 1/10W	
R65	1-216-025-00	METAL GLAZE 100 5% 1/10W		R130	1-216-073-00	METAL GLAZE 10K 5% 1/10W	
R66	1-216-057-00	METAL GLAZE 2.2K 5% 1/10W		R131	1-216-073-00	METAL GLAZE 10K 5% 1/10W	
R67	1-216-057-00	METAL GLAZE 2.2K 5% 1/10W		R132	1-216-025-00	METAL GLAZE 100 5% 1/10W	
R69	1-216-025-00	METAL GLAZE 100 5% 1/10W		R133	1-216-041-00	METAL GLAZE 470 5% 1/10W	
R70	1-216-025-00	METAL GLAZE 100 5% 1/10W		R134	1-216-001-00	METAL GLAZE 10 5% 1/10W	
R71	1-216-025-00	METAL GLAZE 100 5% 1/10W		R135	1-216-045-00	METAL GLAZE 680 5% 1/10W	
R72	1-216-025-00	METAL GLAZE 100 5% 1/10W		R136	1-216-033-00	METAL GLAZE 220 5% 1/10W	
R73	1-216-025-00	METAL GLAZE 100 5% 1/10W		R137	1-216-049-00	METAL GLAZE 1K 5% 1/10W	
R74	1-216-025-00	METAL GLAZE 100 5% 1/10W		R138	1-216-041-00	METAL GLAZE 470 5% 1/10W	
R75	1-216-025-00	METAL GLAZE 100 5% 1/10W		R200	1-216-049-00	METAL GLAZE 1K 5% 1/10W	
R76	1-216-025-00	METAL GLAZE 100 5% 1/10W		R201	1-216-033-00	METAL GLAZE 220 5% 1/10W	
R77	1-216-025-00	METAL GLAZE 100 5% 1/10W		R202	1-216-033-00	METAL GLAZE 220 5% 1/10W	
R78	1-216-025-00	METAL GLAZE 100 5% 1/10W		R203	1-216-025-00	METAL GLAZE 100 5% 1/10W	
R79	1-216-033-00	METAL GLAZE 220 5% 1/10W		R204	1-216-025-00	METAL GLAZE 100 5% 1/10W	
R80	1-216-049-00	METAL GLAZE 1K 5% 1/10W		R205	1-216-093-00	METAL GLAZE 68K 5% 1/10W	
R81	1-216-081-00	METAL GLAZE 22K 5% 1/10W		R206	1-216-033-00	METAL GLAZE 220 5% 1/10W	
R82	1-216-065-00	METAL GLAZE 4.7K 5% 1/10W		R208	1-216-041-00	METAL GLAZE 470 5% 1/10W	
R83	1-216-073-00	METAL GLAZE 10K 5% 1/10W		R209	1-216-049-00	METAL GLAZE 1K 5% 1/10W	
R84	1-216-081-00	METAL GLAZE 22K 5% 1/10W		R210	1-216-017-91	METAL GLAZE 47 5% 1/10W	
R85	1-216-073-00	METAL GLAZE 10K 5% 1/10W		R211	1-216-033-00	METAL GLAZE 220 5% 1/10W	


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REF.NO.	PART NO.	DESCRIPTION	REMARK	REF.NO.	PART NO.	DESCRIPTION	REMARK
R212	1-216-022-00	METAL GLAZE	75 5% 1/10W	R316	1-216-033-00	METAL GLAZE	220 5% 1/10W
R213	1-216-022-00	METAL GLAZE	75 5% 1/10W	R318	1-216-689-11	METAL GLAZE	39K 5% 1/10W
R214	1-216-025-00	METAL GLAZE	100 5% 1/10W	R319	1-216-081-00	METAL GLAZE	22K 5% 1/10W
R216	1-216-025-00	METAL GLAZE	100 5% 1/10W	R320	1-216-025-00	METAL GLAZE	100 5% 1/10W
R217	1-216-113-00	METAL GLAZE	470K 5% 1/10W	R321	1-216-025-00	METAL GLAZE	100 5% 1/10W
R218	1-216-025-00	METAL GLAZE	100 5% 1/10W	R322	1-216-025-00	METAL GLAZE	100 5% 1/10W
R219	1-216-113-00	METAL GLAZE	470K 5% 1/10W	R323	1-216-033-00	METAL GLAZE	220 5% 1/10W
R220	1-216-295-00	METAL GLAZE	0 5% 1/10W	R324	1-216-063-91	METAL GLAZE	3.9K 5% 1/10W
R221	1-216-039-00	METAL GLAZE	390 5% 1/10W	R326	1-216-025-00	METAL GLAZE	100 5% 1/10W
R222	1-216-089-00	METAL GLAZE	47K 5% 1/10W	R327	1-216-025-00	METAL GLAZE	100 5% 1/10W
R223	1-216-295-00	METAL GLAZE	0 5% 1/10W	R328	1-216-129-00	METAL GLAZE	2.2M 5% 1/10W
R224	1-216-039-00	METAL GLAZE	390 5% 1/10W	R329	1-216-089-00	METAL GLAZE	47K 5% 1/10W
R225	1-216-089-00	METAL GLAZE	47K 5% 1/10W	R330	1-216-025-00	METAL GLAZE	100 5% 1/10W
R226	1-216-033-00	METAL GLAZE	220 5% 1/10W	R331	1-216-059-00	METAL GLAZE	2.7K 5% 1/10W
R227	1-216-022-00	METAL GLAZE	75 5% 1/10W	R332	1-216-025-00	METAL GLAZE	100 5% 1/10W
R228	1-216-022-00	METAL GLAZE	75 5% 1/10W	R333	1-216-075-00	METAL GLAZE	12K 5% 1/10W
R229	1-216-033-00	METAL GLAZE	220 5% 1/10W	R334	1-216-041-00	METAL GLAZE	470 5% 1/10W
R230	1-216-022-00	METAL GLAZE	75 5% 1/10W	R335	1-208-806-11	METAL CHIP	10K 0.50% 1/10W
R232	1-216-025-00	METAL GLAZE	100 5% 1/10W	R336	1-216-109-00	METAL GLAZE	330K 5% 1/10W
R233	1-216-025-00	METAL GLAZE	100 5% 1/10W	R337	1-216-025-00	METAL GLAZE	100 5% 1/10W
R234	1-216-113-00	METAL GLAZE	470K 5% 1/10W	R338	1-216-051-00	METAL GLAZE	1.2K 5% 1/10W
R235	1-216-025-00	METAL GLAZE	100 5% 1/10W	R339	1-216-049-00	METAL GLAZE	1K 5% 1/10W
R236	1-216-113-00	METAL GLAZE	470K 5% 1/10W	R340	1-216-025-00	METAL GLAZE	100 5% 1/10W
R237	1-216-295-00	METAL GLAZE	0 5% 1/10W	R341	1-216-025-00	METAL GLAZE	100 5% 1/10W
R238	1-216-089-00	METAL GLAZE	47K 5% 1/10W	R342	1-216-049-00	METAL GLAZE	1K 5% 1/10W
R239	1-216-039-00	METAL GLAZE	390 5% 1/10W	R343	1-216-061-00	METAL GLAZE	3.3K 5% 1/10W
R240	1-216-295-00	METAL GLAZE	0 5% 1/10W	R344	1-216-067-00	METAL GLAZE	5.6K 5% 1/10W
R241	1-216-089-00	METAL GLAZE	47K 5% 1/10W	R345	1-216-025-00	METAL GLAZE	100 5% 1/10W
R242	1-216-039-00	METAL GLAZE	390 5% 1/10W	R346	1-216-063-91	METAL GLAZE	3.9K 5% 1/10W
R243	1-216-033-00	METAL GLAZE	220 5% 1/10W	R347	1-216-025-00	METAL GLAZE	100 5% 1/10W
R244	1-216-033-00	METAL GLAZE	220 5% 1/10W	R348	1-216-025-00	METAL GLAZE	100 5% 1/10W
R245	1-216-073-00	METAL GLAZE	10K 5% 1/10W	R349	1-216-025-00	METAL GLAZE	100 5% 1/10W
R246	1-216-053-00	METAL GLAZE	1.5K 5% 1/10W	R350	1-216-042-00	METAL GLAZE	510 5% 1/10W
R247	1-216-053-00	METAL GLAZE	1.5K 5% 1/10W	R351	1-216-053-00	METAL GLAZE	1.5K 5% 1/10W
R249	1-216-001-00	METAL GLAZE	10 5% 1/10W	R352	1-216-077-00	METAL GLAZE	15K 5% 1/10W
R255	1-216-025-00	METAL GLAZE	100 5% 1/10W	R353	1-216-033-00	METAL GLAZE	220 5% 1/10W
R256	1-216-025-00	METAL GLAZE	100 5% 1/10W	R354	1-216-033-00	METAL GLAZE	220 5% 1/10W
R270	1-216-022-00	METAL GLAZE	75 5% 1/10W	R357	1-216-049-00	METAL GLAZE	1K 5% 1/10W
R271	1-216-022-00	METAL GLAZE	75 5% 1/10W	R370	1-216-295-00	METAL GLAZE	0 5% 1/10W
R272	1-216-022-00	METAL GLAZE	75 5% 1/10W	< TUNER >			
R273	1-216-022-00	METAL GLAZE	75 5% 1/10W	TU101	1-693-338-11	TUNER/VIF (AEP) (KV-29X1A/29X1D/29X1E/29X1K/29X1L/ 29X1R)	
R280	1-216-049-00	METAL GLAZE	1K 5% 1/10W		1-693-340-11	TUNER/VIF (FR) (KV-29X1B)	
R281	1-216-089-00	METAL GLAZE	47K 5% 1/10W		1-693-339-11	TUNER/VIF (UK) (KV-29X1U)	
R282	1-216-093-00	METAL GLAZE	68K 5% 1/10W	< CRYSTAL >			
R283	1-216-049-00	METAL GLAZE	1K 5% 1/10W	X1	1-767-120-21	VIBRATOR, CERAMIC	
R284	1-216-089-00	METAL GLAZE	47K 5% 1/10W	X201	1-760-628-11	VIBRATOR, CRYSTAL	
R285	1-216-093-00	METAL GLAZE	68K 5% 1/10W	X301	1-567-504-11	OSCILLATOR, CRYSTAL	
R286	1-216-049-00	METAL GLAZE	1K 5% 1/10W	X302	1-567-505-11	OSCILLATOR, CRYSTAL	
R300	1-216-025-00	METAL GLAZE	100 5% 1/10W	X303	1-767-127-11	VIBRATOR, CERAMIC	
R301	1-216-033-00	METAL GLAZE	220 5% 1/10W				
R302	1-216-295-00	METAL GLAZE	0 5% 1/10W				
R303	1-216-295-00	METAL GLAZE	0 5% 1/10W				
R308	1-216-025-00	METAL GLAZE	100 5% 1/10W				
R309	1-216-033-00	METAL GLAZE	220 5% 1/10W				
R310	1-216-033-00	METAL GLAZE	220 5% 1/10W				
R311	1-216-295-00	METAL GLAZE	0 5% 1/10W				
R312	1-216-295-00	METAL GLAZE	0 5% 1/10W				
R313	1-216-295-00	METAL GLAZE	0 5% 1/10W				
R314	1-216-295-00	METAL GLAZE	0 5% 1/10W				
R315	1-216-295-00	METAL GLAZE	0 5% 1/10W				

IF (KV-29X1A/29X1D/29X1E/29X1K/
29X1L/29X1R/29X1U)

IF (KV-29X1B)

REF.NO.	PART NO.	DESCRIPTION	REMARK	REF.NO.	PART NO.	DESCRIPTION	REMARK
A-1652-037-A	IF BOARD, COMPLETE	(KV-29X1A/29X1D/ ***** 29X1E/29X1K/ 29X1L/29X1R)		R23	1-216-049-91	METAL GLAZE 1K 5%	1/10W
A-1652-038-A	IF BOARD, COMPLETE	(KV-29X1U) *****		R24	1-216-295-91	METAL GLAZE 0 5%	1/10W
< CAPACITOR >				R25	1-216-057-00	METAL GLAZE 2.2K 5%	1/10W
C01	1-164-337-11	CERAMIC CHIP 2.2MF	16V	R021	1-216-174-00	METAL GLAZE 100 5%	1/8W
C02	1-164-337-11	CERAMIC CHIP 2.2MF	16V	< VARIABLE RESISTOR >			
C03	1-104-957-11	ELECT 47MF	20% 16V	RV01	1-226-703-11	RES, ADJ, METAL GLAZE 10K	
C04	1-135-259-11	TANTAL. CHIP 10MF	20% 6.3V	*****			
C05	1-164-004-11	CERAMIC CHIP 0.1MF	10% 25V	A-1652-036-A	IF BOARD, COMPLETE	(KV-29X1B) *****	
C06	1-164-005-11	CERAMIC CHIP 0.47MF	16V	< CAPACITOR >			
C08	1-164-232-11	CERAMIC CHIP 0.01MF	10% 50V	C01	1-162-638-11	CERAMIC CHIP 1MF	16V
C09	1-164-004-11	CERAMIC CHIP 0.1MF	10% 25V	C02	1-164-337-11	CERAMIC CHIP 2.2MF	16V
C10	1-164-004-11	CERAMIC CHIP 0.1MF	10% 25V	C03	1-104-957-11	ELECT 47MF	20% 16V
C11	1-164-004-11	CERAMIC CHIP 0.1MF	10% 25V	C04	1-135-259-11	TANTAL. CHIP 10MF	20% 6.3V
C15	1-124-282-00	ELECT 22MF	20% 25V	C05	1-164-004-11	CERAMIC CHIP 0.1MF	10% 25V
C16	1-162-638-11	CERAMIC CHIP 1MF	16V	C06	1-164-005-11	CERAMIC CHIP 0.47MF	16V
C18	1-164-337-11	CERAMIC CHIP 2.2MF	16V	C08	1-164-232-11	CERAMIC CHIP 0.01MF	10% 50V
C19	1-124-937-11	ELECT 10MF	20% 16V	C09	1-164-004-11	CERAMIC CHIP 0.1MF	10% 25V
< FILTER >				C10	1-164-004-11	CERAMIC CHIP 0.1MF	10% 25V
CF01	1-404-134-00	TRAP, CERAMIC (5.5MHZ)		C11	1-164-004-11	CERAMIC CHIP 0.1MF	10% 25V
SWF04	1-767-084-11	FILTER, SURFACE WAVE		C12	1-164-232-11	CERAMIC CHIP 0.01MF	10% 50V
< IC >				C13	1-164-232-11	CERAMIC CHIP 0.01MF	10% 50V
IC01	8-759-385-26	IC TDA4472-CFLG3		C14	1-164-232-11	CERAMIC CHIP 0.01MF	10% 50V
< COIL >				C15	1-104-957-11	ELECT 47MF	20% 16V
L02	1-408-408-00	INDUCTOR 8.2UH		C16	1-162-638-11	CERAMIC CHIP 1MF	16V
L04	1-408-419-00	INDUCTOR 68UH		C17	1-163-243-11	CERAMIC CHIP 47PF	5% 50V
L08	1-410-992-11	INDUCTOR CHIP 0.82UH		C18	1-164-337-11	CERAMIC CHIP 2.2MF	16V
< VARIABLE COIL >				C20	1-124-937-11	ELECT 10MF	20% 16V
LV01	1-411-874-11	COIL		C21	1-164-506-11	CERAMIC CHIP 4.7MF	16V
< TRANSISTOR >				< FILTER >			
Q01	8-729-216-22	TRANSISTOR 2SA1162-G		CF01	1-409-430-11	TRAP, CERAMIC	
< RESISTOR >				SWF01	1-579-273-11	FILTER, SURFACE WAVE	
JR01	1-216-296-91	METAL GLAZE 0 5%	1/8W	SWF02	1-760-329-11	FILTER, SURFACE WAVE	
JR02	1-216-296-91	METAL GLAZE 0 5%	1/8W	SWF03	1-767-083-11	FILTER, SURFACE WAVE	
JR03	1-216-295-00	METAL GLAZE 0 5%	1/10W	< TRIMMER >			
JR04	1-216-296-91	METAL GLAZE 0 5%	1/8W	CT01	1-760-662-11	TRAP, CERAMIC	
JR05	1-216-295-00	METAL GLAZE 0 5%	1/10W	< IC >			
JR07	1-216-295-00	METAL GLAZE 0 5%	1/10W	IC01	8-759-069-36	IC MC74HC4046AF	
R01	1-216-029-00	METAL GLAZE 150 5%	1/10W	< COIL >			
R02	1-216-089-91	METAL GLAZE 47K 5%	1/10W	L02	1-408-406-00	INDUCTOR 5.6UH	
R03	1-216-089-91	METAL GLAZE 47K 5%	1/10W	L04	1-408-419-00	INDUCTOR 68UH	
R04	1-216-057-00	METAL GLAZE 2.2K 5%	1/10W	L05	1-410-987-11	INDUCTOR CHIP 0.33UH	
R05	1-216-081-00	METAL GLAZE 22K 5%	1/10W	L06	1-408-399-00	INDUCTOR 1.5UH	
R06	1-216-057-00	METAL GLAZE 2.2K 5%	1/10W	< VARIABLE COIL >			
R07	1-216-025-91	METAL GLAZE 100 5%	1/10W	LV01	1-411-874-11	COIL	
R08	1-216-174-00	METAL GLAZE 100 5%	1/8W	< TRANSISTOR >			
R09	1-216-045-00	METAL GLAZE 680 5%	1/10W	Q01	8-729-216-22	TRANSISTOR 2SA1162-G	
R10	1-216-041-00	METAL GLAZE 470 5%	1/10W	Q02	8-729-035-11	TRANSISTOR BF799-GEG	
R11	1-216-051-00	METAL GLAZE 1.2K 5%	1/10W	Q03	8-729-035-11	TRANSISTOR BF799-GEG	
				Q04	8-729-901-01	TRANSISTOR DTC144EK	

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IF(KV-29X1B)

C


REF.NO.	PART NO.	DESCRIPTION	REMARK	REF.NO.	PART NO.	DESCRIPTION	REMARK
< RESISTOR >				< DIODE >			
JR01	1-216-296-91	METAL GLAZE	0 5% 1/8W	D701	8-719-109-72	DIODE RD3.9ES-B2	
JR02	1-216-296-91	METAL GLAZE	0 5% 1/8W	D702	8-719-991-33	DIODE 1SS133T-77	
JR03	1-216-295-00	METAL GLAZE	0 5% 1/10W	D706	8-719-991-33	DIODE 1SS133T-77	
JR04	1-216-296-91	METAL GLAZE	0 5% 1/8W	D707	8-719-991-33	DIODE 1SS133T-77	
JR05	1-216-295-00	METAL GLAZE	0 5% 1/10W	D708	8-719-991-33	DIODE 1SS133T-77	
JR07	1-216-295-00	METAL GLAZE	0 5% 1/10W	D709	8-719-991-33	DIODE 1SS133T-77	
R01	1-216-029-00	METAL GLAZE	150 5% 1/10W	D710	8-719-991-33	DIODE 1SS133T-77	
R02	1-216-089-91	METAL GLAZE	47K 5% 1/10W	D711	8-719-302-43	DIODE EL1Z	
R03	1-216-089-91	METAL GLAZE	47K 5% 1/10W	D714	8-719-991-33	DIODE 1SS133T-77	
R04	1-216-057-00	METAL GLAZE	2.2K 5% 1/10W	D715	8-719-991-33	DIODE 1SS133T-77	
R05	1-216-081-00	METAL GLAZE	22K 5% 1/10W	D716	8-719-991-33	DIODE 1SS133T-77	
R06	1-216-057-00	METAL GLAZE	2.2K 5% 1/10W	D717	8-719-991-33	DIODE 1SS133T-77	
R07	1-216-025-91	METAL GLAZE	100 5% 1/10W	D718	8-719-991-33	DIODE 1SS133T-77	
R08	1-216-174-00	METAL GLAZE	100 5% 1/8W	D719	8-719-991-33	DIODE 1SS133T-77	
R09	1-216-045-00	METAL GLAZE	680 5% 1/10W	D720	8-719-991-33	DIODE 1SS133T-77	
R10	1-216-041-00	METAL GLAZE	470 5% 1/10W	< CRT SOCKET >			
R11	1-216-051-00	METAL GLAZE	1.2K 5% 1/10W	J701 1-526-990-22 SOCKET, CRT			
R12	1-216-063-91	METAL GLAZE	3.9K 5% 1/10W	< COIL >			
R13	1-216-061-00	METAL GLAZE	3.3K 5% 1/10W	L704	1-408-609-41	INDUCTOR 33UH	
R14	1-216-023-00	METAL GLAZE	82 5% 1/10W	< TRANSISTOR >			
R15	1-216-017-91	METAL GLAZE	47 5% 1/10W	Q702	8-729-119-78	TRANSISTOR 2SC2785-HFE	
R16	1-216-033-00	METAL GLAZE	220 5% 1/10W	Q703	8-729-906-70	TRANSISTOR BF871-127	
R17	1-216-017-91	METAL GLAZE	47 5% 1/10W	Q704	8-729-200-17	TRANSISTOR 2SA1091-O	
R18	1-216-013-00	METAL GLAZE	33 5% 1/10W	Q705	8-729-119-78	TRANSISTOR 2SC2785-HFE	
R20	1-216-222-00	METAL GLAZE	10K 5% 1/8W	Q706	8-729-906-70	TRANSISTOR BF871-127	
R23	1-216-049-91	METAL GLAZE	1K 5% 1/10W	Q707	8-729-200-17	TRANSISTOR 2SA1091-O	
R25	1-216-057-00	METAL GLAZE	2.2K 5% 1/10W	Q708	8-729-119-78	TRANSISTOR 2SC2785-HFE	
R21	1-216-174-00	METAL GLAZE	100 5% 1/8W	Q709	8-729-906-70	TRANSISTOR BF871-127	
< VARIABLE RESISTOR >				Q710	8-729-200-17	TRANSISTOR 2SA1091-O	
RV01	1-226-703-11	RES, ADJ, METAL GLAZE 10K		Q711	8-729-173-38	TRANSISTOR 2SA733-K	
RV02	1-226-703-11	RES, ADJ, METAL GLAZE 10K		< RESISTOR >			
*****				R704	1-216-486-00	METAL OXIDE 8.2K 5% 3W F	
*A-1638-082-A C BOARD, COMPLETE				R705	1-260-103-11	CARBON 2.2K 5% 1/2W	
*****				R706	1-247-815-91	CARBON 220 5% 1/4W	
< CAPACITOR >				R707	1-249-408-11	CARBON 180 5% 1/4W	
C702	1-102-824-00	CERAMIC 470PF	5% 50V	R709	1-202-844-00	SOLID 330K 10% 1/2W	
C703	1-102-116-00	CERAMIC 680PF	10% 50V	R711	1-249-423-11	CARBON 3.3K 5% 1/4W	
C708	1-162-114-00	CERAMIC 0.0047MF	2KV	R712	1-260-103-11	CARBON 2.2K 5% 1/2W	
C710	1-107-652-11	ELECT 10MF	20% 250V	R714	1-216-486-00	METAL OXIDE 8.2K 5% 3W F	
C712	1-102-116-00	CERAMIC 680PF	10% 50V	R715	1-249-417-11	CARBON 1K 5% 1/4W	
C714	1-126-967-11	ELECT 47MF	20% 16V	R716	1-247-815-91	CARBON 220 5% 1/4W	
C717	1-102-114-00	CERAMIC 470PF	10% 50V	R717	1-249-408-11	CARBON 180 5% 1/4W	
C718	1-102-114-00	CERAMIC 470PF	10% 50V	R718	1-202-814-11	SOLID 33K 10% 1/2W	
C719	1-102-114-00	CERAMIC 470PF	10% 50V	R720	1-249-423-11	CARBON 3.3K 5% 1/4W	
C722	1-101-880-00	CERAMIC 47PF	5% 50V	R722	1-202-848-00	SOLID 680K 10% 1/2W	
C723	1-101-880-00	CERAMIC 47PF	5% 50V	R723	1-249-417-11	CARBON 1K 5% 1/4W	
C724	1-101-880-00	CERAMIC 47PF	5% 50V	R724	1-202-846-00	SOLID 470K 10% 1/2W	
< CONNECTOR >				R726	1-260-103-11	CARBON 2.2K 5% 1/2W	
CN701	1-778-037-11	PIN, CONNECTOR 6P		R727	1-247-815-91	CARBON 220 5% 1/4W	
CN702	1-695-915-11	TAB (CONTACT)		R728	1-216-350-11	METAL OXIDE 1.2 5% 1W F	
CN703	*1-568-882-51	PIN, CONNECTOR 7P		R729	1-249-408-11	CARBON 180 5% 1/4W	
				R731	1-249-423-11	CARBON 3.3K 5% 1/4W	
				R733	1-249-415-11	CARBON 680 5% 1/4W	
				R734	1-247-807-31	CARBON 100 5% 1/4W	
				R735	1-249-415-11	CARBON 680 5% 1/4W	


C**D2****D**

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REF.NO.	PART NO.	DESCRIPTION	REMARK	REF.NO.	PART NO.	DESCRIPTION	REMARK
R736	1-216-486-00	METAL OXIDE 8.2K 5% 3W	F	C509	1-136-165-00	FILM 0.1MF 5%	50V
R739	1-249-417-11	CARBON 1K 5% 1/4W		C510	1-126-969-11	ELECT 220MF 20%	50V
R740	1-249-415-11	CARBON 680 5% 1/4W		C511	1-136-202-11	FILM 0.33MF 5%	63V
R741	1-202-549-00	SOLID 100 20% 1/2W		C513	1-106-220-00	MYLAR 0.1MF 10%	100V
R744	1-249-421-11	CARBON 2.2K 5% 1/4W		C514	1-136-165-00	FILM 0.1MF 5%	50V
R745	1-249-421-11	CARBON 2.2K 5% 1/4W		C515	1-126-941-11	ELECT 470MF 20%	25V
R746	1-249-421-11	CARBON 2.2K 5% 1/4W		C517	1-126-941-11	ELECT 470MF 20%	25V
R747	1-249-437-11	CARBON 47K 5% 1/4W		C518	1-102-228-00	CERAMIC 470PF 10%	500V
R748	1-249-417-11	CARBON 1K 5% 1/4W		C519	1-102-228-00	CERAMIC 470PF 10%	500V
R749	1-249-435-11	CARBON 33K 5% 1/4W		C520	1-126-941-11	ELECT 470MF 20%	25V
< VARIABLE RESISTOR >				C521	1-124-006-11	ELECT 10MF 20%	25V
RV701	1-230-641-11	RES, ADJ, METAL GLAZE 2.2M		C522	1-126-964-11	ELECT 10MF 20%	50V
RV702	1-241-656-21	RES, ADJ, METAL FILM 110M		C523	1-136-165-00	FILM 0.1MF 5%	50V
*****				C600	1-113-890-51	ELECT 0.0022MF 20%	250V
*A-1640-214-A D2 BOARD, COMPLETE				C601	1-161-964-91	CERAMIC 0.0047MF 250V	
*****				C602	1-161-964-91	CERAMIC 0.0047MF 250V	
< CAPACITOR >				C603	1-125-555-11	ELECT 330MF 20%	400V
C1801	1-126-967-11	ELECT 47MF 20% 50V		C604	1-126-968-11	ELECT 100MF 20%	50V
C1803	1-137-368-11	FILM 0.0047MF 5% 50V		C605	1-107-929-11	ELECT 10MF 20%	100V
C1804	1-126-964-11	ELECT 10MF 20% 50V		C606	1-162-318-11	CERAMIC 0.001MF 10%	500V
C1807	1-137-366-11	FILM 0.0022MF 5% 50V		C607	1-104-666-11	ELECT 220MF 20%	25V
< CONNECTOR >				C608	1-109-880-11	FILM 0.0015MF 3%	2KV
CN1801	1-573-299-21	CONNECTOR, BOARD TO BOARD 10P		C611	1-102-228-00	CERAMIC 470PF 10%	500V
CN1803	*1-568-878-51	PIN, CONNECTOR 3P		C612	1-111-160-11	ELECT 22MF 20%	100V
< DIODE >				C613	1-124-347-00	ELECT 100MF 20%	160V
D1802	8-719-110-17	DIODE RD10ESB2		C614	1-128-526-11	ELECT 100MF 20%	25V
< IC >				C615	1-111-067-11	ELECT 0.001F 20%	25V
IC1801	8-759-701-59	IC MCT7809CT		C616	1-111-067-11	ELECT 0.001F 20%	25V
IC1802	8-759-603-37	IC M5216P		C617	1-128-339-11	ELECT 2200MF 20%	16V
< IC LINK >				C618	1-136-165-00	FILM 0.1MF 5%	50V
JW1802	1-533-605-91	LINK IC 0.4A (ICP-F10)		C619	1-102-228-00	CERAMIC 470PF 10%	500V
< RESISTOR >				C620	1-102-228-00	CERAMIC 470PF 10%	500V
R1807	1-247-883-00	CARBON 150K 5% 1/4W		C621	1-136-165-00	FILM 0.1MF 5%	50V
R1809	1-249-429-11	CARBON 10K 5% 1/4W		C622	1-104-797-11	ELECT 0.47MF 20%	100V
R1810	1-249-429-11	CARBON 10K 5% 1/4W		C623	1-104-666-11	ELECT 220MF 20%	25V
R1811	1-249-429-11	CARBON 10K 5% 1/4W		C624	1-136-165-00	FILM 0.1MF 5%	50V
R1812	1-249-429-11	CARBON 10K 5% 1/4W		C625	1-126-967-11	ELECT 47MF 20%	50V
*****				C626	1-104-666-11	ELECT 220MF 20%	25V
*A-1642-165-A D BOARD, COMPLETE				C628	1-126-964-11	ELECT 10MF 20%	50V
*****				C629	1-111-097-11	ELECT 0.0022F 20%	35V
4-201-023-01 SPACER, INSULATING				C630	1-111-097-11	ELECT 0.0022F 20%	35V
4-202-373-01 SPRING, IC				C631	1-126-965-11	ELECT 22MF 20%	50V
< CAPACITOR >				C632	1-104-666-11	ELECT 220MF 20%	25V
C502	1-102-824-00	CERAMIC 470PF 5% 50V		C633	1-107-564-11	FILM 0.22MF 20%	300V
C503	1-136-165-00	FILM 0.1MF 5% 50V		C634	1-107-564-11	FILM 0.22MF 20%	300V
C504	1-102-824-00	CERAMIC 470PF 5% 50V		C635	1-107-564-11	FILM 0.22MF 20%	300V
C506	1-126-941-11	ELECT 470MF 20% 25V		C636	1-113-890-51	ELECT 0.0022MF 20%	250V
C507	1-109-953-11	ELECT 2.2MF 20% 50V		C640	1-106-220-00	MYLAR 0.1MF 10%	100V
				C647	1-162-116-00	CERAMIC 680PF 10%	2KV
				C651	1-102-228-00	CERAMIC 470PF 10%	500V
				C800	1-137-368-11	FILM 0.0047MF 5%	50V
				C801	1-137-372-11	FILM 0.022MF 5%	50V
				C802	1-136-153-00	FILM 0.01MF 5%	50V
				C804	1-136-165-00	FILM 0.1MF 5%	50V
				C805	1-136-207-11	FILM 0.047MF 10%	250V
				C806	1-104-999-11	MYLAR 0.1MF 10%	200V
				C807	1-136-109-00	FILM 0.68MF 5%	200V
				C808	1-137-205-11	FILM 0.1MF 5%	400V
				C810	1-107-683-11	ELECT 2.2MF 0	250V
				C811	1-102-212-00	CERAMIC 820PF 10%	500V

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C812	1-136-125-00	FILM	0.68MF 5% 400V	CN1420	*1-568-878-51	PIN, CONNECTOR 3P	
C813	1-129-722-00	FILM	0.047MF 10% 630V			< DIODE >	
C814	1-136-565-11	FILM	0.015MF 3% 1.4KV	D500	8-719-109-85	DIODE RD5.1ES-B2	
C815	1-136-562-11	MYLAR	0.0082MF 10% 400V	D502	8-719-979-85	DIODE EGP20G	
C816	1-161-754-00	CERAMIC	0.001MF 10% 2KV	D503	8-719-979-85	DIODE EGP20G	
C817	1-161-754-00	CERAMIC	0.001MF 10% 2KV	D504	8-719-991-33	DIODE 1SS133T-77	
C818	1-162-134-11	CERAMIC	470PF 10% 2KV	D505	8-719-982-03	DIODE MTZJ-3.6A	
C819	1-136-208-11	FILM	0.068MF 10% 250V	D506	8-719-991-33	DIODE 1SS133T-77	
C820	1-102-114-00	CERAMIC	470PF 10% 50V	D507	8-719-109-85	DIODE RD5.1ES-B2	
C821	1-162-114-00	CERAMIC	0.0047MF 2KV	D600	8-719-510-53	DIODE D4SB60L	
C822	1-107-662-11	ELECT	22MF 20% 250V	D601	8-719-046-77	DIODE EM1-V1	
C824	1-123-024-21	ELECT	33MF 160V	D603	8-719-109-97	DIODE RD6.8ES-B2	
C829	1-124-902-00	ELECT	0.47MF 50V	D604	8-719-046-75	DIODE EU-1-V1	
C830	1-124-902-00	ELECT	0.47MF 50V	D605	8-719-302-43	DIODE EL1Z	
C832	1-124-903-11	ELECT	1MF 20% 50V	D606	8-719-302-43	DIODE EL1Z	
C834	1-128-551-11	ELECT	22MF 20% 25V	D607	8-719-046-78	DIODE EG-1Z-V1	
C835	1-162-318-11	CERAMIC	0.001MF 10% 500V	D608	8-719-312-94	DIODE EU2-V1	
C836	1-162-117-00	CERAMIC	100PF 10% 500V	D609	8-719-301-64	DIODE RU4DS	
C838	1-102-228-00	CERAMIC	470PF 10% 500V	D610	8-719-046-74	DIODE AU-01Z-V1	
C839	1-136-189-00	FILM	0.1MF 10% 250V	D611	8-719-045-48	DIODE FML-G12S	
C845	1-102-110-00	CERAMIC	220PF 10% 50V	D612	8-719-046-76	DIODE RU-3YX-V1	
C901	1-101-810-00	CERAMIC	100PF 5% 500V	D613	8-719-045-48	DIODE FML-G12S	
C902	1-137-372-11	FILM	0.022MF 5% 50V	D614	8-719-045-48	DIODE FML-G12S	
C903	1-137-372-11	FILM	0.022MF 5% 50V	D615	8-719-046-75	DIODE EU-1-V1	
C904	1-104-665-11	ELECT	100MF 20% 25V	D616	8-719-110-03	DIODE RD7.5ESB2	
C905	1-126-964-11	ELECT	10MF 20% 50V	D617	8-719-991-33	DIODE 1SS133T-77	
C906	1-126-964-11	ELECT	10MF 20% 50V	D618	8-719-991-33	DIODE 1SS133T-77	
C907	1-126-964-11	ELECT	10MF 20% 50V	D619	8-719-991-33	DIODE 1SS133T-77	
C908	1-126-964-11	ELECT	10MF 20% 50V	D620	8-719-991-33	DIODE 1SS133T-77	
C911	1-126-964-11	ELECT	10MF 20% 50V	D622	8-719-923-60	DIODE MTZJ-T-77-9.1A	
C913	1-101-810-00	CERAMIC	100PF 5% 500V	D625	8-719-991-33	DIODE 1SS133T-77	
C1200	1-136-165-00	FILM	0.1MF 5% 50V	D626	8-719-046-74	DIODE AU-01Z-V1	
C1201	1-136-173-00	FILM	0.47MF 5% 50V	D631	8-719-109-93	DIODE RD6.2ES-B2	
C1202	1-136-173-00	FILM	0.47MF 5% 50V	D800	8-719-991-33	DIODE 1SS133T-77	
C1203	1-136-169-00	FILM	0.22MF 5% 50V	D801	8-719-991-33	DIODE 1SS133T-77	
C1204	1-136-169-00	FILM	0.22MF 5% 50V	D802	8-719-991-33	DIODE 1SS133T-77	
C1205	1-101-005-00	CERAMIC	0.022MF 50V	D803	8-719-908-03	DIODE GP08D	
C1206	1-101-005-00	CERAMIC	0.022MF 50V	D807	8-719-302-43	DIODE EL1Z	
C1207	1-126-933-11	ELECT	100MF 20% 16V	D808	8-719-908-03	DIODE GP08D	
C1208	1-126-963-11	ELECT	4.7MF 20% 50V	D809	8-719-018-82	DIODE RGP02-20EL-6394	
C1209	1-126-963-11	ELECT	4.7MF 20% 50V	D810	8-719-302-43	DIODE EL1Z	
C1214	1-126-933-11	ELECT	100MF 20% 16V	D812	8-719-038-49	DIODE FMS-3FU-LF027-1	
C1215	1-136-173-00	FILM	0.47MF 5% 50V	D815	8-719-908-03	DIODE GP08D	
C1216	1-137-366-11	FILM	0.0022MF 5% 50V	D817	8-719-109-89	DIODE RD5.6ESB2	
C1217	1-137-366-11	FILM	0.0022MF 5% 50V	D901	8-719-030-11	DIODE SLA-570KT3F	
C1218	1-126-934-11	ELECT	220MF 20% 16V		*4-203-258-01	HOLDER, LED	
		< CONNECTOR >		D902	8-719-923-60	DIODE MTZJ-T-77-9.1A	
CN600	1-508-786-00	PIN, CONNECTOR (5MM PITCH) 2P		D903	8-719-923-60	DIODE MTZJ-T-77-9.1A	
CN601	1-508-765-11	PIN, CONNECTOR (5MM PITCH) 3P		D904	8-719-923-60	DIODE MTZJ-T-77-9.1A	
CN603	*1-580-844-11	PIN, CONNECTOR (POWER)		D905	8-719-923-60	DIODE MTZJ-T-77-9.1A	
CN800	*1-580-798-11	CONNECTOR PIN (DY) 6P		D906	8-719-923-60	DIODE MTZJ-T-77-9.1A	
CN801	*1-573-296-21	CONNECTOR, BOARD TO BOARD 10P		D1201	8-719-109-72	DIODE RD3.9ES-B2	
CN803	1-695-915-11	TAB (CONTACT)				< FUSE >	
CN804	1-778-037-11	PIN, CONNECTOR 6P		F601	1-576-232-21	FUSE (H.B.C.) 5.0A/250V	
CN807	1-568-878-51	PIN, CONNECTOR 3P			1-533-230-12	HOLDER, FUSE F601	
CN900	1-568-678-11	TERMINAL BLOCK, S 3P				< FERRITE BEAD >	
CN902	1-695-299-11	CONNECTOR, BOARD TO BOARD 50P		FB600	1-410-397-21	FERRITE BEAD INDUCTOR 1.1UH	
CN1401	*1-568-880-51	PIN, CONNECTOR 5P					
CN1408	*1-568-879-11	PIN, CONNECTOR 4P					




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The components identified by shading and marked are critical for safety. Replace only with the part number specified.

REF.NO.	PART NO.	DESCRIPTION	REMARK	REF.NO.	PART NO.	DESCRIPTION	REMARK
FB601	1-410-397-21	FERRITE BEAD INDUCTOR 1.1UH		Q604	8-729-024-35	TRANSISTOR 2SC2808STP-R	
FB602	1-410-397-21	FERRITE BEAD INDUCTOR 1.1UH		Q605	8-729-119-78	TRANSISTOR 2SC2785-HFE	
FB604	1-410-396-41	FERRITE BEAD INDUCTOR 0.45UH		Q606	8-729-900-65	TRANSISTOR DTA144ES	
FB605	1-410-396-41	FERRITE BEAD INDUCTOR 0.45UH		Q607	8-729-119-78	TRANSISTOR 2SC2785-HFE	
FB606	1-410-397-21	FERRITE BEAD INDUCTOR 1.1UH		Q800	8-729-119-78	TRANSISTOR 2SC2785-HFE	
FB607	1-410-397-21	FERRITE BEAD INDUCTOR 1.1UH		Q801	8-729-017-06	TRANSISTOR 2SC4793	
FB608	1-410-396-41	FERRITE BEAD INDUCTOR 0.45UH		Q802	8-729-016-32	TRANSISTOR 2SC4927-01	
FB800	1-410-396-41	FERRITE BEAD INDUCTOR 0.45UH		Q803	8-729-119-80	TRANSISTOR 2SC2688-LK	
				Q805	8-729-900-89	TRANSISTOR DTC144ES	
< IC >				Q900	8-729-119-78	TRANSISTOR 2SC2785-HFE	
IC500	8-759-192-71	IC STV9379		Q1200	8-729-119-78	TRANSISTOR 2SC2785-HFE	
IC600	8-749-010-84	IC STR-S6708		Q1201	8-729-900-74	TRANSISTOR DTC143TS	
IC601	8-749-924-92	IC TLP721(D4)		Q1202	8-729-900-80	TRANSISTOR DTC114ES	
IC602	8-749-920-61	IC SE-135N		Q1203	8-729-900-74	TRANSISTOR DTC143TS	
IC603	8-759-144-82	IC MPC2405HF		Q1204	8-729-900-74	TRANSISTOR DTC143TS	
IC604	8-759-366-13	IC L4941BV		< RESISTOR >			
IC606	8-759-267-25	IC LM2940T-9.0		R500	1-215-457-00	METAL 33K 1%	1/4W
IC800	8-759-103-93	IC MPC393P		R502	1-249-421-11	CARBON 2.2K 5%	1/4W
IC900	8-747-905-11	RAY CATCHER ELEMENT SBX1790-51		R503	1-249-429-11	CARBON 10K 5%	1/4W
IC1200	8-759-250-68	IC TDA7264		R504	1-215-455-00	METAL 27K 1%	1/4W
IC1201	8-759-502-21	IC TDA2822M		R505	1-249-382-11	CARBON 1.2 5%	1/4W F
< JACK >				R506	1-215-439-00	METAL 5.6K 1%	1/4W
J900	1-764-606-11	JACK		R507	1-215-888-00	METAL OXIDE 220 5%	2W F
< COIL >				R508	1-216-371-00	METAL OXIDE 1.5 5%	2W F
L502	1-412-519-11	INDUCTOR 3.3UH		R509	1-249-443-11	CARBON 0.47 5%	1/4W F
L503	1-412-519-11	INDUCTOR 3.3UH		R510	1-249-443-11	CARBON 0.47 5%	1/4W F
L609	1-412-533-21	INDUCTOR 47UH		R520	1-215-457-00	METAL 33K 1%	1/4W
L611	1-412-527-11	INDUCTOR 15UH		R521	1-215-455-00	METAL 27K 1%	1/4W
L612	1-412-522-41	INDUCTOR 5.6UH		R522	1-247-863-91	CARBON 22K 5%	1/4W
L613	1-412-522-41	INDUCTOR 5.6UH		R523	1-247-863-91	CARBON 22K 5%	1/4W
L615	1-412-529-11	INDUCTOR 22UH		R524	1-249-425-11	CARBON 4.7K 5%	1/4W
L616	1-412-533-21	INDUCTOR 47UH		R525	1-249-425-11	CARBON 4.7K 5%	1/4W
L801	1-459-111-00	COIL, DRAM CORE (CDI)		R526	1-249-421-11	CARBON 2.2K 5%	1/4W
L802	1-459-104-00	COIL, WITH CORE		R527	1-215-437-00	METAL 4.7K 1%	1/4W
L803	1-420-872-00	COIL, AIR CORE		R600	1-216-490-11	METAL OXIDE 39K 5%	3W F
L804	1-406-903-11	COIL, HORIZONTAL LINEARITY		R601	1-249-417-11	CARBON 1K 5%	1/4W
L805	1-406-675-11	COIL, CHOKE 4.7MMH		R602	1-215-473-00	METAL 150K 1%	1/4W
L809	1-412-533-21	INDUCTOR 47UH		R603	1-215-898-11	METAL OXIDE 10K 5%	2W F
L811	1-406-979-11	COIL, CHOKE 220UH		R604	1-249-420-11	CARBON 1.8K 5%	1/4W
L813	1-412-552-11	INDUCTOR 2.2MMH		R605	1-216-362-11	METAL OXIDE 0.27 5%	2W F
L901	1-408-603-31	INDUCTOR 10UH		R607	1-216-421-11	METAL OXIDE 12 5%	1W F
L902	1-408-603-31	INDUCTOR 10UH		R608	1-216-365-00	METAL OXIDE 0.47 5%	2W F
L903	1-408-409-00	INDUCTOR 10UH		R610	1-215-421-00	METAL 1K 1%	1/4W
L904	1-408-409-00	INDUCTOR 10UH		R611	1-216-354-11	METAL OXIDE 2.7 5%	1W F
< IC LINK >				R612	1-249-428-11	CARBON 8.2K 5%	1/4W
R6600	1-532-686-91	LINK, IC 2.7A (ICP-F75)		R613	1-249-417-11	CARBON 1K 5%	1/4W
R6601	1-532-686-91	LINK, IC 2.7A (ICP-F75)		R614	1-215-877-11	METAL OXIDE 22K 5%	1W F
R6602	1-532-686-91	LINK, IC 2.7A (ICP-F75)		R615	1-249-435-11	CARBON 33K 5%	1/4W
R6603	1-532-686-91	LINK, IC 2.7A (ICP-F75)		R616	1-215-471-00	METAL 120K 1%	1/4W
< TRANSISTOR >				R617	1-215-901-00	METAL OXIDE 33K 5%	2W F
Q501	8-729-119-78	TRANSISTOR 2SC2785-HFE		R618	1-247-863-91	CARBON 22K 5%	1/4W
Q502	8-729-119-76	TRANSISTOR 2SA1175-HFE		R619	1-216-425-11	METAL OXIDE 56 5%	1W F
Q503	8-729-900-89	TRANSISTOR DTC144ES		R620	1-260-131-11	CARBON 470K 5%	1/2W
Q601	8-729-025-04	TRANSISTOR 2SC3852A		R621	1-216-425-11	METAL OXIDE 56 5%	1W F
Q602	8-729-320-28	TRANSISTOR 2SA1667		R622	1-249-437-11	CARBON 47K 5%	1/4W
Q603	8-729-802-78	TRANSISTOR 2SC3502-E		R623	1-249-429-11	CARBON 10K 5%	1/4W
				R624	1-249-393-11	CARBON 10 5%	1/4W F
				R625	1-249-434-11	CARBON 27K 5%	1/4W
				R626	1-249-430-11	CARBON 12K 5%	1/4W

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REF.NO.	PART NO.	DESCRIPTION	REMARK	REF.NO.	PART NO.	DESCRIPTION	REMARK
R627	1-216-347-11	METAL OXIDE	0.68 5% 1W F	R908	1-249-401-11	CARBON	47 5% 1/4W
R628	1-249-415-11	CARBON	680 5% 1/4W F	R909	1-249-429-11	CARBON	10K 5% 1/4W
R629	1-244-945-91	CARBON	1M 5% 1/2W	R910	1-249-422-11	CARBON	2.7K 5% 1/4W
R630	1-218-265-21	METAL	8.2M 5% 1W	R911	1-249-426-11	CARBON	5.6K 5% 1/4W
R631	1-205-949-11	WIREWOUND	1.8 5% 10W	R912	1-249-429-11	CARBON	10K 5% 1/4W
R632	1-247-807-31	CARBON	100 5% 1/4W	R913	1-247-863-91	CARBON	22K 5% 1/4W
R633	1-247-807-31	CARBON	100 5% 1/4W	R914	1-249-437-11	CARBON	47K 5% 1/4W
R634	1-249-397-11	CARBON	22 5% 1/4W F	R919	1-249-437-11	CARBON	47K 5% 1/4W
R635	1-249-437-11	CARBON	47K 5% 1/4W	R921	1-249-437-11	CARBON	47K 5% 1/4W
R636	1-249-417-11	CARBON	1K 5% 1/4W	R922	1-247-807-31	CARBON	100 5% 1/4W
R637	1-247-815-91	CARBON	220 5% 1/4W	R923	1-249-412-11	CARBON	390 5% 1/4W
R638	1-247-863-91	CARBON	22K 5% 1/4W	R1200	1-249-425-11	CARBON	4.7K 5% 1/4W
R639	1-215-439-00	METAL	5.6K 1% 1/4W	R1201	1-249-434-11	CARBON	27K 5% 1/4W
R642	1-205-949-11	WIREWOUND	1.8 5% 10W	R1202	1-249-389-11	CARBON	4.7 5% 1/4W F
R645	1-249-422-11	CARBON	2.7K 5% 1/4W	R1203	1-249-421-11	CARBON	2.2K 5% 1/4W
R646	1-249-377-11	CARBON	0.47 5% 1/4W F	R1204	1-249-421-11	CARBON	2.2K 5% 1/4W
R647	1-202-933-61	FUSIBLE	0.1 10% 1/2W F	R1205	1-249-428-11	CARBON	8.2K 5% 1/4W
R800	1-249-421-11	CARBON	2.2K 5% 1/4W	R1206	1-249-428-11	CARBON	8.2K 5% 1/4W
R802	1-247-863-91	CARBON	22K 5% 1/4W	R1208	1-212-849-00	FUSIBLE	4.7 5% 1/4W F
R803	1-249-424-11	CARBON	3.9K 5% 1/4W	R1209	1-212-849-00	FUSIBLE	4.7 5% 1/4W F
R805	1-249-429-11	CARBON	10K 5% 1/4W	R1211	1-249-424-11	CARBON	3.9K 5% 1/4W
R809	1-249-441-11	CARBON	100K 5% 1/4W	R1212	1-249-424-11	CARBON	3.9K 5% 1/4W
R812	1-249-421-11	CARBON	2.2K 5% 1/4W	R1213	1-249-421-11	CARBON	2.2K 5% 1/4W
R813	1-215-867-00	METAL OXIDE	470 5% 1W F	R1216	1-249-413-11	CARBON	470 5% 1/4W
R814	1-249-411-11	CARBON	330 5% 1/4W	R1217	1-249-425-11	CARBON	4.7K 5% 1/4W
R816	1-215-917-11	METAL OXIDE	1K 5% 3W F	< RELAY >			
R817	1-216-481-11	METAL OXIDE	1.2K 5% 3W F	RY600	1-755-018-11	RELAY	
R818	1-215-882-00	METAL OXIDE	22 5% 2W F	< SWITCH >			
R819	1-216-345-11	METAL OXIDE	0.47 5% 1W F	SG01	1-571-433-21	SWITCH, PUSH (AC POWER)	
R820	1-249-403-11	CARBON	68 5% 1/4W	S900	1-692-979-11	SWITCH, TACTILE	
R821	1-215-909-11	METAL OXIDE	47 5% 3W F	S901	1-692-979-11	SWITCH, TACTILE	
R822	1-215-868-00	METAL OXIDE	680 5% 1W F	S902	1-692-979-11	SWITCH, TACTILE	
R824	1-249-420-11	CARBON	1.8K 5% 1/4W	< SPARK GAP >			
R826	1-247-752-11	CARBON	1K 5% 1/2W	SG801	1-519-422-11	GAP, SPARK	
R827	1-249-425-11	CARBON	4.7K 5% 1/4W	< TRANSFORMER >			
R828	1-249-430-11	CARBON	12K 5% 1/4W	LF600	1-421-776-11	LFT	
R829	1-249-493-11	CARBON	56K 5% 1/2W	LF601	1-421-776-11	LFT	
R830	1-217-778-11	FUSIBLE	1K 5% 1W F	T601	1-429-605-11	TRANSFORMER, CONVERTER	
R833	1-247-887-00	CARBON	220K 5% 1/4W	T800	1-424-545-11	TRANSFORMER, FERRITE (PMT)	
R835	1-216-471-11	METAL OXIDE	27 5% 3W F	T803	1-453-169-11	TRANSFORMER ASSY, FLYBACK (UX-160442)	
R836	1-249-439-11	CARBON	68K 5% 1/4W	T804	1-437-090-31	HDT	
R837	1-249-427-11	CARBON	6.8K 5% 1/4W	< THERMISTOR >			
R840	1-247-807-31	CARBON	100 5% 1/4W	THP600	1-809-827-11	THERMISTOR, POSITIVE	
R841	1-249-418-11	CARBON	1.2K 5% 1/4W	*****			
R842	1-249-425-11	CARBON	4.7K 5% 1/4W	*A-1644-070-A VM BOARD, COMPLETE			
R843	1-249-441-11	CARBON	100K 5% 1/4W	*****			
R846	1-247-885-00	CARBON	180K 5% 1/4W	*4-368-683-11 SPRING, TRANSISTOR			
R847	1-247-895-91	CARBON	470K 5% 1/4W	*4-368-683-21 SPRING, TRANSISTOR			
R848	1-247-863-91	CARBON	22K 5% 1/4W	< CAPACITOR >			
R849	1-249-429-11	CARBON	10K 5% 1/4W	C1701	1-126-933-11	ELECT	100MF 20% 16V
R850	1-249-425-11	CARBON	4.7K 5% 1/4W	C1702	1-128-551-11	ELECT	22MF 20% 25V
R851	1-215-898-11	METAL OXIDE	10K 5% 2W F				
R852	1-249-432-11	CARBON	18K 5% 1/4W				
R900	1-247-815-91	CARBON	220 5% 1/4W				
R901	1-247-734-11	CARBON	39 5% 1/2W				
R902	1-247-734-11	CARBON	39 5% 1/2W				
R904	1-249-389-11	CARBON	4.7 5% 1/4W F				
R905	1-247-804-11	CARBON	75 5% 1/4W				
R906	1-247-804-11	CARBON	75 5% 1/4W				
R907	1-247-804-11	CARBON	75 5% 1/4W				

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The components identified by shading and marked **A** are critical for safety.
Replace only with the part number specified.

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